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Abstract
Although shipboard MEU Air Combat Element (ACE) Readiness in the Mediterranean currently meets and exceeds CNO goals, there remains room for improvement. Significant logistics training and experience deficiencies exist within the ACE, supporting MALS, and aboard LHA/LHD class ships. Ongoing disputes regarding control of the MALS detachment aviation supply officer also result in poor ACE-ship relations. Aviation logistics oversight of the LHA/LHD by two type commanders (COMNAVAIRLANT and COMNAVSURFLANT) creates confusion and sometimes compromises aviation interests. Finally, although split-ARG offers the MEU operational flexibility, it detracts from aircraft readiness by dividing scarce manpower, equipment, and spare parts between ships. to solve these problems, the Navy and Marine Corps must overhaul existing training and experience prerequisites for deploying personnel to ensure they are qualified and capable of providing optimum support. Formally placing the MALS detachment aviation supply officer under the operational control of the ship will also improve supply support and ACE-ship relations. Additionally, placing the LHA/LHD under COMNAVAIRLANT control will ensure that aviation issues receive the utmost priority. finally, if our warfighters plan to continue split-ARG operations, they must formalize the requirement in order for supporting activities to gain the additional materiel required to effectively conduct them.

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ALTHOUGH SHIPBOARD MEU AIR COMBAT ELEMENT (ACE) READINESS IN THE MEDITERRANEAN CURRENTLY MEETS AND EXCEEDS CNO GOALS, THERE REMAINS ROOM FOR IMPROVEMENT. SIGNIFICANT LOGISTICS TRAINING AND EXPERIENCE DEFICIENCIES EXIST WITHIN THE ACE, SUPPORTING MALS, AND ABOARD LHA/LHD CLASS SHIPS. ONGOING DISPUTES REGARDING CONTROL OF THE MALS DETACHMENT AVIATION SUPPLY OFFICER ALSO RESULT IN POOR ACE-SHIP RELATIONS. AVIATION LOGISTICS OVERSIGHT OF THE LHA/LHD BY TWO TYPE COMMANDERS (COMNAVAIRLANT AND COMNAVSURFLANT) CREATES CONFUSION AND SOMETIMES COMPROMISES AVIATION INTERESTS. FINALLY, ALTHOUGH SPLIT-ARG OFFERS THE MEU OPERATIONAL FLEXIBILITY, IT DETRACTS FROM AIRCRAFT READINESS BY DIVIDING SCARCE MANPOWER, EQUIPMENT, AND SPARE PARTS BETWEEN SHIPS. TO SOLVE THESE PROBLEMS, THE NAVY AND MARINE CORPS MUST OVERHAUL EXISTING TRAINING AND EXPERIENCE PREREQUISITES FOR DEPLOYING PERSONNEL TO ENSURE THEY ARE QUALIFIED AND CAPABLE OF PROVIDING OPTIMUM SUPPORT. FORMALLY PLACING THE MALS DETACHMENT AVIATION SUPPLY OFFICER UNDER THE OPERATIONAL CONTROL OF THE SHIP WILL ALSO IMPROVE SUPPLY SUPPORT AND ACE-SHIP RELATIONS. ADDITIONALLY, PLACING THE LHA/LHD UNDER COMNAVAIRLANT CONTROL WILL ENSURE THAT AVIATION ISSUES RECEIVE THE UTMOST PRIORITY. FINALLY, IF OUR WARFIGHTERS PLAN TO CONTINUE SPLIT-ARG OPERATIONS, THEY MUST FORMALIZE THE REQUIREMENT IN ORDER FOR SUPPORTING ACTIVITIES TO GAIN THE ADDITIONAL MATERIEL REQUIRED TO EFFECTIVELY CONDUCT THEM.

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THE OPINIONS AND CONCLUSIONS EXPRESSED HEREIN ARE THOSE OF THE INDIVIDUAL STUDENT AUTHOR AND DO NOT NECESSARILY REPRESENT THE VIEWS OF EITHER THE MARINE CORPS COMMAND AND STAFF COLLEGE OR ANY OTHER GOVERNMENTAL AGENCY. REFERENCES TO THIS STUDY SHOULD INCLUDE THE FOREGOING STATEMENT.

Executive Summary

Title: Improving the aircraft readiness of the Marine Aviation Combat Element deployed to the Mediterranean Sea

Author: Major Joseph H. Knapp, United States Marine Corps

Thesis: We can we optimize the quality of aviation logistics support available to the Marine Air Combat Element (ACE) deployed to the Mediterranean as part of a Marine Expeditionary Unit (MEU) through educational, organizational, and philosophical changes.

Discussion: Although deployed aircraft readiness in the Mediterranean is meeting and exceeding established Chief of Naval Operations (CNO) goals, there remains room for improvement. Significant logistics training and experience deficiencies currently exist within the ACE and supporting Marine Aviation Logistics Squadron (MALS). Similarly, the aviation supply training and experience aboard LHA/LHD Class ships is lacking in comparison to personnel in similar billets within the aircraft carrier community. Shipboard chain of command problems also exist regarding the continuing ACE versus LHA/LHD fight for control of the MALS Detachment Aviation Supply Officer, a situation that often results in poor ACE-ship relations and ultimately detracts from aircraft readiness. An additional organizational problem involves the LHA/LHD aviation logistics oversight by two different Type Commanders. Unlike aircraft carriers, which are controlled exclusively by COMNAVAIRLANT, the LHA/LHD are controlled by both COMNAVAIRLANT and COMNAVSURFLANT. Unfortunately, this arrangement creates confusion for the both the ship and other supporting agencies regarding the division of support responsibilities. Additionally, the interests between air and surface Type Commanders sometimes clash, resulting in a compromise that may not always be in the best interests of aviation. Finally, although Split Amphibious Ready Group (Split-ARG) operations offer the MEU Commander the ability to project amphibious power and/or respond to several contingencies simultaneously, the very nature of these operations require the division of scarce manpower, equipment, and spare parts, resulting in a decrease in support capability aboard both the LHA/LHD and the LPD.

Conclusions and Recommendations: The Navy and Marine Corps should thoroughly review the training and experience prerequisites for deploying ACE, MALS, and shipboard logistics personnel to ensure they are capable of providing optimum support. In addition, we must make a dedicated effort to ensure these personnel meet or exceed these criteria before sending them on deployment. Shipboard organizational problems can be solved by placing the MALS Detachment Aviation Supply Officer under the operational control of the ship in order to optimize the quality of logistics supply support afloat and to prevent intramural squabbling between the ship and ACE. Deployed aviation readiness and support can also be significantly streamlined and improved by placing all LHA/LHD class ships under the complete control COMNAVAIRLANT, an organization whose primary concern is aviation. Finally, if warfighters plan to continue conducting Split-ARG operations, then they must formalize the requirement in order for supporting logistics agencies to budget for, acquire, and stock the additional aviation materiel required to effectively conduct them.

Preface

The attached paper focuses upon improving the daily aircraft readiness of the Marine Corps ACE deployed aboard ships in the Mediterranean. Although this topic is continually of great concern to both the warfighter and supporting logistics commands, surprisingly little has been done to either officially document deficiencies or provide recommendations for improvement. Minimal traditional reference material exists on this specific topic, so the preponderance of my research was focused upon information obtained from Navy and Marine Corps publications and directives, as well as telephone and e-mail liaison with key supporting activities.

My thesis is that the Navy and Marine Corps can improve deployed aircraft readiness aboard L-Class ships by increasing our logistics efficiency and awareness. Accordingly, our efforts should be placed upon logistics training and education, organization, and philosophy. The traditional answer of improving deployed aircraft readiness by increasing shipboard parts allowances is simply no longer practical in light of today's tight defense budget and a corresponding austere spare parts environment. We must search out and implement better ways to do business.

It is important to understand that this paper is written strictly from a Marine Corps aviation logistician's perspective and may be somewhat controversial to the remainder of the aviation establishment, who traditionally focuses the majority of their efforts on operations. Changing the current operational-oriented paradigms will not be easy, and it will take a concerted effort by both the Navy and Marine Corps operations and logistics communities.

In closing, I would like to acknowledge the fact that I am especially indebted to the following commands and personnel for their guidance and contributions of time, information, and opinions. Without them, this study would not have been possible:

Commander Naval Air Force, U.S. Atlantic Fleet (Code N411D)

Navy Supply Corps School

Aircraft Maintenance Officer School

Marine Aviation Logistics Squadron 26

Marine Aviation Logistics Squadron 29

Colonel Darrell A. Browning, U.S. Marine Corps

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Chapter 1: The Deployed MEU and Aviation Readiness

The Marine Expeditionary Unit (MEU) deployed in the Mediterranean Sea aboard L-Class amphibious shipping represents the concept of forward naval presence at its finest. A highly trained Marine Air-Ground Task Force, the MEU is capable of performing traditional amphibious missions as well as a variety of special operations. This flexibility offers warfighters a handy and effective tool to rapidly deal with contingencies ranging across the entire spectrum of conflict from peacekeeping to waging conventional war.

The embarked MEU Air Combat Element (ACE) is capable of providing the MEU Commander with nearly all of the functions of Marine Corps aviation, including critical capabilities such as assault support, close air support, offensive air support, and aerial reconnaissance. The ACE truly provides the speed, shock, and surprise required to effectively prosecute effective maneuver warfare.[1] In order to remain an effective weapon in the MEU Commander's arsenal, the ACE must retain its aircraft in the highest possible state of readiness.

The good news about deployed ACE aircraft readiness is that from 1996 to 2000, it met and exceeded Chief of Naval Operations (CNO) standards for deployed aircraft (see Appendix A). During the aforementioned time frame, ACEs deployed in the Mediterranean averaged 85% Mission Capable (MC) and 80% Full Mission Capable (FMC) aircraft per day, as compared to the CNO goals of 78/61.[2] This difference between the ACE figures and the CNO goals translates to 2.5 more aircraft MC and 6.8 more aircraft FMC per each day of the entire sixth month deployment.

Despite this significant accomplishment, there is still significant room to optimize the quality of aviation logistics support available to the deployed ACE and ultimately improve the readiness of its aircraft through training/educational, organizational, and philosophical changes.

Chapter 2: Personnel Education and Experience

Overall readiness is a joint product of the ACE, the supporting Marine Aviation Logistics Squadron (MALS) Detachment, and the supporting ship. Accordingly, there are several key personnel involved in the readiness process. The ACE Commanding Officer sets the overall operational tone for the squadron. The ACE Maintenance Officer is responsible for maintaining the aircraft, which includes organizational level troubleshooting, minor repair, and parts replacement. The L-Class Supply Officer is responsible for providing the necessary parts required by the ACE, and the ship's Afloat Intermediate Maintenance Activity (AIMD) Officer is responsible for performing intermediate level repairs to aviation components, which lie beyond the capability of the ACE, and manufacturing appropriate non-safety-of-flight designated aircraft parts. Finally, the MALS Detachment Aviation Supply Officer augments the ship's Aviation Stores (S-6) Division and serves as liaison between the ship and ACE on aviation supply and associated aircraft readiness matters. It is absolutely imperative that all the aforementioned personnel have, at a bare minimum, completed the requisite aviation supply and/or aircraft maintenance indoctrination and Military Occupational Specialty (MOS—Marine Corps) or Designator (Navy) training prior to actual deployment. This training, education, and experience is essential to provide these personnel with a common understanding of aviation logistics support and to allow them to effectively manage their personnel and equipment

resources. Anything less sub optimizes the overall quality of logistics support, and ultimately ACE aircraft readiness. The assumption that these personnel can learn all they need to know via on-the-job training alone is an invalid one, since there is no realistic substitute for training and experience. Interestingly enough, responses to the author's L-Class Aviation Supply and Maintenance Personnel Survey (see Appendix B) indicated a number of readiness shortfalls which can be attributed directly to a failure of logistics personnel to properly train and/or continually supervise their subordinates in even the most basic of aviation supply and aircraft maintenance procedures.

The ACE Commanding Officer sets the overall tempo of the ACE. As such, he must have an appreciation for the capabilities, requirements, and limitations of aviation logistics. A successful Commanding Officer understands that in today's austere spare parts environment, operations no longer drive logistics, but rather, logistics drive operations. Although the deployed ACE Commanding Officer will continue to receive the finest support possible, aviation logistics will undoubtedly be the primary limitation on his planned operations. Although short-term logistics surge capability does exist in support of critical operations, it is of limited depth and cannot be depended upon to sustain prolonged operations. The prudent Commanding Officer realizes this and effectively marshals his supporting logistics in a manner that enables him to surge when required and rebuild when operations subside, thereby enabling him to avoid the infamous logistics operational pause, a situation where battlefield tempo is interrupted due to the inadequacy of logistics support.

Surprisingly, ACE Commanding Officers generally have little to no experience in logistics unless they had the good fortune to serve in either a squadron Maintenance Officer or Logistics (S-4) Officer billet at some point during their careers. The author's study recently conducted among six Marine Medium Helicopter (HMM) squadrons located at Marine Corps Air Station (MCAS) New River found that only one HMM Commanding Officer had served as the squadron Maintenance Officer, and that this individual had never received any required formal training. Ironically, another HMM Commanding Officer previously received formal training as a Maintenance Officer, but never served in that capacity (see Appendix C). In fact, no formal aviation logistics education requirement currently exists for HMM CO's (see Appendix D). Even the Commander's Course presented by Headquarters Marine Corps (HQMC) to all prospective Marine Corps battalion and squadron commanders makes only cursory mention of aviation logistics.[3] In an effort to educate new and prospective Navy and Marine Corps squadron Commanding Officers with important aviation logistics issues, Navy Supply Corps School (NSCS) Athens GA conducts a special 3-day class appropriately titled "Commanding Officer's Joint Aviation Supply-Maintenance Material Management Course (COJASMMM)," which is held four times annually. This course is designed to familiarize squadron Commanding Officers with the basics of aviation supply and maintenance organization, procedures, and responsibilities.[4] Although the COJASMMM course is regularly scheduled throughout the year and its dates posted on the school's Internet website, the author's research (see Appendix E) discovered that no squadron Commanding Officer from 2d MAW attended the course from 1996-2000.[5]

It appears that a significant portion of ACE Commanding Officers are currently leading their squadrons with only the most basic of logistics instruction that they have received at

required Professional Military Education (PME) courses such as The Basic School (TBS), Amphibious Warfare School, Command and Staff College, and War College. This over-reliance on PME-only logistics training is insufficient, due to minimal depth of logistics-related material presented at the aforementioned courses and also due to the timeliness of the information itself. It is important to remember that aviation logistics is a dynamic field and new technology, procedures, and equipment are continually being implemented into the operating forces.

An ACE Commanding Officer lacking the appropriate logistics background or knowledge also often fails to realize the importance that aviation logistics plays in during deployed operations. This lack of knowledge and or concern regarding aviation logistics is best demonstrated by the fact that ACE Commanding Officers rarely attend pre-deployment aviation logistics meetings, choosing instead to delegate the matter to their squadron maintenance personnel. Conversely, supporting Navy and Marine Corps Type Commanders (TYCOM), such as COMNAVAIRLANT, COMNAVSURFLANT, and COMMARFORLANT feel that these same meetings are of such great value that they detail specialized field grade officers to research and conduct them. It is also not uncommon for a significant number of TYCOM O-5 and O-6 rank officers to attend these meetings, yet the ACE Commanding Officer they will support on deployment seems to have placed his/her priorities elsewhere. Unfortunately, it is often these same ACE Commanding Officers who give guidance to “fly the paint off” of the aircraft during deployment and to continually surge beyond realistic support levels. Although short-term surge is often possible, all too frequently the duration of the surge exceeds logistics capability and aircraft readiness eventually suffers. In other cases, ACE Commanding Officers have gone as far as refusing to allow their “tactical” aircraft to perform the “logistics” flights necessary to pick-up

up their own aircraft parts and supplies, since they view aviation logistics as someone else's responsibility.

ACE Commanding Officers are not the only personnel who require a solid aviation logistics background in order to operate at peak efficiency. Unfortunately, the ACE Maintenance Officer also sometimes lacks the necessary aviation logistics education and experience, but is still tasked to make critical decisions each day regarding ACE aircraft. The HQMC Table of Organization (T/O) for HMM squadrons directs that the ACE Maintenance Officer be a Major with a primary MOS of 7562 (CH-46E Helicopter Pilot) and a required secondary MOS of 6002 (Aircraft Maintenance Officer).[6] According to the Marine Corps MOS Manual, the secondary 6002 MOS designation may only be awarded to an individual following his/her successful completion of the Naval Aviation Management Program (NAMP) Management Course (CIN Q-4D-2011) presented by Naval Aviation Schools Command (NASC) at Pensacola, FL; a six month period of formal on-the-job training within the squadron; and finally upon the recommendation of the squadron Commanding Officer.[7] The NAMP Management Course is an abbreviated Maintenance Officer course conducted six times per year and appropriately designed for students that already have at least two years experience within the naval aviation community.[8] The primary objective of the course is to provide the prospective Maintenance Officer with the technical, managerial, and administrative skills necessary to enable him to effectively direct a squadron maintenance department. To this end, the course emphasizes the importance of the Naval Supply System, the maintenance process, the maintenance-training program, safety, maintenance administration, and aircraft weight/balance considerations. The NAMP instruction requires that squadron Commanding Officers ensure that all officers assigned

to maintenance department billets attend this required training prior to or within sixty days of assuming their billet.[9] Unfortunately, the aforementioned requirements are seldom followed. In a recent survey conducted among six east coast HMM squadrons, only three (50%) of the Maintenance Officers had completed the required NAMP Management Course, and that the average time in billet for those who had not attended the course ranged from 45 days to 26 months (see Appendix F). Further research indicates that only four Maintenance Officers (Major, MOS 7562) from the six east coast HMM squadrons (66%) attended the NAMP Management Course since 1996 (see Appendices F and G), which is only a fraction of the total number of personnel that served in HMM Maintenance Officer billets during that same period. For the record, it is possible for a Navy or Marine Corps Unit to request a waiver or deviation to operate outside NAMP requirements (e.g., request to waive the NAMP Management Course requirements for Maintenance Officers). Such a request for deviation must be routed in writing through the chain of command to either the Aircraft Controlling Custodian (COMNAVAIRLANT in the case of east coast units) or CNO.[10] Interestingly enough, contact with CNO indicates that no 2d MAW requests for relaxation of formal ACE Maintenance Officer training requirements have been either submitted or approved.[11]

There are several potential causes for this problem. First, operational tempo for the HMM squadrons is very high and the Commanding Officer may feel that he cannot afford to send his prospective Maintenance Officer to school due to other operational commitments. Second, Temporary Additional Duty (TAD) Funding is traditionally scarce within squadrons, thereby making it fiscally difficult to attend the course, and third, quotas for the NAMP Management Course can be difficult to obtain.[12] A Commanding Officer that places a high

precedence on aviation logistics would not allow the first two situations to occur, as they involve circumstances in which he has considerable influence (e.g., personnel orders and priority of TAD spending). There may be legitimate concern however, over the availability of NAMP Management Course quotas to individual squadrons. It is important to remember that all squadrons within 2d MAW, not just the HMMs, are vying for limited school slots for their prospective Maintenance Officers. According to NASC, school seats are limited, but no prospective student is turned completely away from the NAMP Management Course, only scheduled for the next available class. Unfortunately, it is not uncommon for the slotted student to cancel his seat in the next available class due to other operational requirements. Unsurprisingly, the longer that a student delays attending the NAMP Management Course, the less likely it is that he will ever attend. By not regularly sending its new Maintenance Officers to the NAMP Management Course over the past several years, the Marine Corps inadvertently exacerbated the situation involving limited school seat quotas. In 1996, the number of NAMP Management Courses held per year was reduced from ten to seven (six mixed rank classes and one Warrant Officer-only class) following a CNO Efficiency Review that analyzed previous fleet participation in the course. The review subsequently found that the fleet did not routinely fill the NAMP Management Course quotas, thereby creating a manpower and resource inefficiency at NASC. Accordingly, the number of courses was reduced to a level commensurate with actual fleet participation.[13]

The bottom line here is that the ACE Commanding Officer cannot expect his Maintenance Officer to effectively perform his duties if he has not been given the opportunity to attain the skills necessary to safely and efficiently run a squadron maintenance department. It is

important to understand that an ACE Maintenance Officer on deployment runs a department consisting of over 60 HMM personnel plus several dozen other maintenance personnel augments from the Marine Corps Light Attack Helicopter (HML/A), Heavy Helicopter (HMH), and Fixed-Wing Attack (VMA) Squadrons.[14] Lastly, the ACE Maintenance Officer is responsible for the training and supervision of all assigned subordinate maintenance department personnel. From both a leadership and a technical proficiency standpoint, how can an untrained Maintenance Officer be effective in such an endeavor if he is not fully trained himself? Similarly, how can an untrained Maintenance Officer prepare accurate performance evaluations on his subordinates if he is not aware of their responsibilities?

An additional source of valuable follow-on aviation supply and maintenance training is available to the ACE Maintenance Officer in the form of the Joint Aviation Supply-Maintenance Material Management (JASMMM) Course, offered by NSCS nine times per year.[15] CNO realizes the importance of this course and the NAMP directs that Navy and Marine Corps Maintenance Officers attend this course "when possible."[16] This 2-week course is open to Navy and Marine Corps personnel ranking from E-6 (Staff Sergeant/Petty Officer First Class) to O-4 (Major/Lieutenant Commander). The JASMMM course was developed in the 1970's to enhance the interface and cooperation of aviation supply and aircraft maintenance personnel working in supervisory positions. Over two dozen individual aviation logistics topics are discussed during the course and guest speakers from major logistics commands such as Naval Inventory Control Point–Philadelphia, Defense Logistics Agency, Naval Aviation Safety Center, and COMNAVAIRLANT provide an opportunity for students to gain an understanding of the challenges currently facing aviation logisticians. Although this course offers a significant

learning opportunity for ACE Maintenance Officers, a review of NSCS student rosters (see Appendix H) from 02 December 1996 to 29 September 2000 indicates that not a single HMM Maintenance Officer from any 2d MAW squadron attended the course during that time period.[17] As a significant squadron department head, ACE Maintenance Officers are also allowed to attend the COJASMMM course, but as in the same case as 2d MAW HMM Commanding Officers (see Appendix E), none have elected to do so since the course began in 1996.[18]

Yet another unique training opportunity exists for ACE Maintenance Officers that have previously attended the NAMP Management Course and subsequently received the required 6002 MOS. The Advanced Logistics Officers Course (ALOC) is an optional 3-week, HQMC funded course implemented in 1996 to provide Majors and Lieutenant Colonels with intermediate level education on the strategic, operational, and tactical levels of logistics.[19] Interestingly, although Marine Corps aviation supply and aircraft maintenance logisticians have regularly attended ALOC since it's debut and represent 8.9% of the total students to date (see Appendix I), research into student rosters show that not a single Major or Lieutenant Colonel Maintenance Officer from a 2d MAW HMM squadron has ever attended the course.[20]

In practice, the ACE Maintenance Material Control Officer (MMCO) is either a First Lieutenant or a Warrant Officer, both of which have received their formal maintenance training prior to assignment to the fleet and generally possess more aircraft maintenance department expertise than their Maintenance Officer supervisor. Newly commissioned Second Lieutenants (Primary MOS 6002) attend the 66-day Aircraft Maintenance Officer Course (CIN Q-4D-2010) at NASC immediately following graduation from TBS. Warrant Officers (MOS 6604--Aircraft Maintenance Engineer Officer) are selected from a competitive pool of enlisted aviation

applicants to attend officer training at TBS and subsequent maintenance training at NASC. Since Warrant Officers already have considerable aviation experience, they are required only to attend the NAMP Management Course. Both Lieutenant and Warrant Officer MMCOs routinely deploy with the squadron and usually participate in short duration deployments within the continental United States (CONUS) that give them valuable experience prior to embarking aboard ship. That said, MMCOs rarely receive follow-on JASMMM Course training designed to enhance their coordination and cooperation with aviation supply officers, skills that will optimize their performance aboard ship. In fact, the author's research into JASMMM attendance (see Appendices H and J) found that only two 2d MAW MMCOs assigned to HMM squadrons have attended the JASMMM course since 1996.[21]

The MALS Detachment Aviation Supply Officer is also a key player in the aircraft readiness chain. Both Lieutenants and Warrant Officers in the aviation supply field attend formal MOS training at the 15-week Aviation Basic Qualification Course (CIN A-8B-0031) at NSCS either immediately upon graduation from TBS or shortly after reporting to their first duty station. The course is held semi-annually and the aviation supply curriculum is focused upon document flow, receipt processing, inventory management, and accounting.[22] Students must successfully complete this course in order to be awarded either the 6602 or 6604 MOS. Once a Lieutenant or Warrant Officer returns from MOS schooling, he is tentatively assigned to an HMM squadron and immediately placed into the shipboard deployment rotation. Unfortunately, operational tempo is high and these personnel generally find themselves on a Mediterranean deployment in less than 18 months, giving them very little time in a pre-deployment garrison environment to practice their newly acquired skills, to complete follow-on training, and/or to gain experience from participating in short-duration CONUS deployments. Interestingly enough,

HQMC does not recognize the need to deploy a MALS Detachment Aviation Supply Officer on MEU deployments to the Mediterranean, as demonstrated by the lack of supporting T/O structure within the Aviation Supply Department. The MEU, however, fully realizes the importance of deploying a Marine Corps Aviation Supply Officer aboard ship, and the MEU Troop List includes the requirement for an MOS 6604 (Aviation Supply Operations Officer) Warrant Officer to fill this billet. Unfortunately, the supporting MALS must take this billet "out of hide," thereby creating a shortage of officers to support remain-behind CONUS operations. Although the troop list calls for a Warrant Officer, the MALS Detachment Aviation Supply Officer is most often an MOS 6602 (Aviation Supply Officer) First Lieutenant.[23] This is due to the fact that MOS 6604 Warrant Officers are relatively scarce within the MALS. In fact, there are only three on the rotor-wing MALS T/O as opposed to five MOS 6602 Lieutenants.[24] It is also imperative that these Lieutenants gain valuable deployment experience in order for them to grow professionally and to remain competitive for augmentation and/or promotion.

Both Lieutenants and Warrant Officers in the aviation supply field are eligible to attend the JASMMM course, but research indicates that the aforementioned personnel rarely receive this valuable training before they deploy. In fact, NSCS records from 1996-2000 (see Appendix H) indicate that between MALS-26 and MALS-29, only one Lieutenant and one Warrant Officer eligible for Mediterranean deployment attended the JASMMM course.[25] Similarly, a current snapshot of potential MALS Detachment Aviation Supply Officers at those same units shows that only one of the ten candidates (10%) eligible for deployment has attended the JASMMM course to date (see Appendix K).

Navy Supply Corps Officers aboard the LHA/LHD (e.g., The L-Class Supply Officer and Aviation Stores (S-6) Division Officer) also generally lack the aviation supply training and experience necessary for them to perform optimally during deployment. Unlike their Marine Corps aviation supply counterparts that receive 4 months of aviation-specific MOS training, Navy Supply Corps Officers receive no aviation supply indoctrination training during their 24-week Basic Qualification Course.[26] This situation is due to the fact that aviation supply is a relatively small area in which Navy Supply Corps Officers may potentially work aboard ship during their careers. Accordingly, it is currently considered to be most cost effective to teach only those basic fields of study within the curriculum in which the Navy Supply Corps Officer is most likely to serve. These fields include payroll/disbursing, billeting, food service operations, acquisition, accounting, vending, and postal service.[27] In fact, no Navy Supply Corps personnel are required to receive aviation supply training unless they are assigned to major aviation-capable platforms such as the LHA, LHD, aircraft carrier (CV/N), or to an aviation billet ashore. In those instances, personnel assigned in aviation billets are required to attend only the JASMMM Course.[28]

Research by the author indicates that among Atlantic Fleet ships, L-Class Supply Officers (a Commander/O-5 rank billet) have 53% less aviation supply experience than their CV/N counterparts, and that none of the L-Class Supply Officers had previously served as an S-6 Division Officer (see Appendix L). In addition, three of five (60%) of the CV/N Supply Officers surveyed had previously served on the COMNAVAIRLANT Staff, where they had gained valuable firsthand experience supporting deployed aircraft carriers and L-Class ships before they were assigned to the CV/Ns. JASMMM attendance was relatively equal between the L-Class and CV/N Supply Officers, with 75% and 80% attending the course, respectively. COJASMMM

attendance for both the CV/N and L-Class Supply Officers was poor (see Appendix E), as only four had attended the course from 1996-2000.[29] The author's recent survey of Atlantic Fleet L-Class and CV/N Supply Officers revealed that not one of ten has completed the COJASMMM Course (see Appendix L).

Another valuable source of aviation training available to L-Class Supply Officers is the optional Naval Aviation Supply Officer (NASO) program. This CNO sponsored program is designed to develop a cadre of Naval Supply Corps Officers capable of providing the finest logistics support possible to aviation units. The primary requirement to successfully complete the NASO program involves the satisfactory completion of a comprehensive 35-page background syllabus on aviation supply, aircraft maintenance, and shipboard aviation flight operations. The NASO candidate is then required to serve a period of on-the-job training aboard an L-Class or CV/N and pass an oral board examination by a panel of senior supply and aircraft maintenance officers.[30] Once the applicant has successfully completed the aforementioned requirements, he is eligible to wear the NASO Breast Insignia, a device that denotes the wearer as an aviation supply specialist. Research by the author into the NASO qualification of current Atlantic Fleet L-Class Supply Officers shows that two of four (50%) are NASO qualified, while an identical query on CV/N Supply Officers discovered that four of five (80%) are NASO qualified (see Appendix L).

Deficiencies also exist regarding the follow-on training and practical aviation support experience of L-Class S-6 Division Officers. From 1996-2000, S-6 Division Officer attendance at the JASMMM Course was relatively common, as evidenced by 13 students representing 5

Atlantic Fleet L-Class ships (see Appendix H). A recent survey by the author indicates that this trend is continuing, as three of four (75%) of the current L-Class S-6 Division Officers that responded to the survey have completed the course. These statistics for L-Class S-6 Division Officers are slightly better than those of their CV/N counterparts, of whom only 71% of the survey respondents have completed the course. A comparison of NASO qualifications shows that 50% of the L-Class and 43% of the current CV/N S-6 Division Officers have completed the optional training (see Appendix M). JASMMM attendance aside, it is not uncommon to encounter a newly christened L-Class S-6 Division Officer that has previously served only aboard submarines or subsurface combatants and has no aviation supply experience. In fact, the author saw this happen three times aboard Atlantic Fleet L-Class ships from 1999-2000. It is quite unrealistic to expect a Lieutenant Junior Grade or Lieutenant in this situation to effectively learn his trade on the fly, especially during the rigors of work-up exercises or deployment. Another problem hampering the development of the S-6 Division Officer is a lack of aviation business aboard ship during non-deployed periods. When the decision was made in the early 1990s to permanently remove the Navy UH-1N Search and Rescue (SAR) from the L-Class ships, daily aviation support requirements aboard ship (e.g., aircraft maintenance and aviation supply) were virtually eliminated.[31] Unfortunately, having no aircraft aboard ship has deprived these personnel of valuable year–round support experience. Although the S-6 Division Officer is still required to requisition, stock, and manage Aviation Consolidated Allowance Listing (AVCAL) material, the work is minimal and his only customer is the AIMD, who may order piece parts sporadically to repair shipboard aviation test or support equipment. Needless to say, the only significant hands-on experience that the S-6 Division Officer gets is when ACE aircraft fly aboard for work-ups or deployment. Such infrequent learning opportunities for L-Class S-6

Division Officers are even in stark contrast to those of the Lieutenant MALS Detachment Aviation Supply Officers, who lack experience, but at least have significant schoolhouse training and the opportunity to support Marine Corps aircraft on a continual basis.

Chapter 3: Control of the MALS Det Aviation Supply Officer

Under a long-standing "gentlemen's agreement," the MALS Detachment Aviation Supply Officer for shipboard deployments is operationally attached to the L-Class ship and administratively attached to the ACE. By design, the MALS Detachment Aviation Supply Officer and his Marines work directly for the Ship's Supply Officer and augment the Navy personnel within the S-6 Division. It is understood that the ship will send these aviation supply Marines ashore or to other operating ships in support of any required ACE operating detachments. Although this arrangement has been in existence for as long as anyone can recall, controversy still arises nearly every time a new ACE deploys to the Mediterranean.

Problems occur when the ACE embarks aboard ship and does not want to relinquish control of the MALS Detachment Aviation Supply Officer and his Marines to the ship. In these cases, the ACE Commanding Officer most often places the MALS Detachment Aviation Supply Officer under the direct charge of the ACE Maintenance Officer, with the intent of gaining maximum control over aviation supply operations aboard ship. Although no one can fault the ACE Commanding Officer for attempting to optimize his level of support, the move creates instant animosity between the ship and the ACE, as it violates an established command relationship, creates a supply versus maintenance conflict of interest, and ultimately degrades the

capability, morale, and performance of the MALS Detachment Aviation Supply Officer (see Appendix N).

The animosity between the ship and ACE is created simply because the ACE is neither living up to its end of the "gentlemen's agreement," nor providing the ship with the manpower and technical expertise that it so greatly requires. Secondly, having the MALS Detachment Aviation Supply Officer work for the ACE Maintenance Officer creates a genuine conflict of interest, as it subordinates aviation supply to aircraft maintenance operations. It should be noted that in 1988, HQMC purposely designed the MALS concept to make aircraft maintenance and aviation supply co-equal partners in logistics support, and this arrangement continues by T/O to this day.[32] In addition, subordinating the MALS Detachment Aviation Supply Officer under the Maintenance Officer frequently generates questions regarding loyalty. Although the ACE Commanding Officer seeks to gain operational control (OPCON) of the MALS Detachment Aviation Supply Officer, the commander still needs this officer to work within the S-6 division, since the L-Class Supply Officer owns all shipboard spare parts and controls aviation supply operations. In effect, the MALS Detachment Aviation Supply Officer is powerless without the resources that the ship provides. Unfortunately, the L-Class Supply Officer tends not to trust the MALS Detachment Aviation Supply Officer, since he is being tasked and evaluated by the ACE. This lack of trust can lead to the L-Class Supply Officer sometimes restricting the MALS Detachment Aviation Supply Officer from critical access to the parts, equipment, and computers necessary for him to effectively perform his duties. As an L-Class Supply Officer accountable for literally millions of dollars worth of aviation spare parts, it is difficult to trust an outsider, especially one working under ACE maintenance guidance. One would like to believe that this

particular fear was unfounded, but an incident occurred aboard *USS Nassau* (LHA-4) in 1996 that gave the Marine Corps reputation a black eye. In this particular case, a young MALS Detachment Aviation Supply Officer working under the cognizance of the ACE during work-up exercises was allowed unrestricted access to the ship's aviation supply storerooms. Unfortunately, this same individual was caught red-handed by the L-Class Supply Officer trying to slip the ACE an expensive aircraft component via clandestine means. The ship's Commanding Officer eventually dropped formal charges against the Marine, but expressly forbid the individual to ever set foot aboard the ship again. Not only was the Marine Corps reputation tarnished across the waterfront, the MALS had to find a last minute replacement for the banished Lieutenant just before the ACEs scheduled deployment to the Mediterranean. Granted, the MALS Detachment Aviation Supply Officer in this case exercised extremely poor judgment, but at the same time, it was unfair to put that individual in the precarious position of attempting to serve two masters (the ACE Maintenance Officer and the L-Class Supply Officer).

Another aspect of this control problem involves the performance evaluation of the MALS Detachment Aviation Supply Officer. As previously mentioned, the ACE Maintenance Officer tasks and often serves as the Reporting Senior (RS) for fitness reporting purposes. Typically, the ACE Commanding Officer then serves as the Reviewing Officer (RO). Unfortunately, the Maintenance Officer has neither the adequate background, nor the expertise to effectively evaluate aviation supply performance. As mentioned in the previous chapter, the preponderance of these ACE Maintenance Officers have not even attended formal maintenance training. It is also important to remember that the overriding concern for the Maintenance Officer is to keep the ACE aircraft flying; hence, standard aviation supply procedures such as paperwork and

accountability are not always considered a priority. Finally, a Maintenance Officer with little or no aviation supply knowledge may unknowingly, but unfairly hold a MALS Detachment Aviation Supply Officer accountable for poor parts situations that are well beyond the scope of his control, thereby decreasing the morale of the young officer and potentially damaging his next performance rating. As a side note, the author has heard several Atlantic Fleet L-Class Supply Officers commonly refer to the aforementioned situation as "The Marine Corps eating their own young."

Chapter 4: Type Commander Oversight

COMNAVAIRLANT and COMNAVSURFLANT formulate aviation logistics policies and procedures for Atlantic Fleet L-Class ships. This arrangement arises from the fact that COMNAVSURFLANT owns the L-Class ships and personnel, while COMNAVAIRLANT owns the aircraft, shipboard aviation equipment, and repairable spare parts funding (see Appendix O). This unique situation is in sharp contrast with that of the CV/N fleet, which is owned, staffed, equipped, and operated exclusively by COMNAVAIRLANT, an organization whose priority is aviation.

To logistically support the L-Class ships and embarked ACE, both COMNAVAIRLANT and COMNAVSURFLANT maintain separate aviation supply and maintenance staffs, whose functions are neatly divided. The COMNAVSURFLANT focus is upon readying the ship for deployment, monitoring supply stocks, aviation personnel assignments, and equipment, while the COMNAVAIRLANT focus is upon optimizing ACE readiness by providing aviation education, equipment, funding, spare parts, and other technical assistance. Although the existing division of

TYCOM support functions is well defined and understood by both COMNAVAIRLANT and COMNAVSURFLANT, this division is neither well understood outside TYCOM circles, nor is it "customer friendly." Twin TYCOM oversight of L-Class aviation logistics support has created a situation that frequently leads to frustration and confusion, not only among supported ACEs and L-Class ships, but also among Navy and Marine Corps higher headquarters and supporting activities. For example, it is not uncommon for an activity to contact COMNAVAIRLANT in an attempt to obtain supply effectiveness statistics for L-Class ships. Although COMNAVAIRLANT routinely tracks this information for CV/Ns (as they are operated exclusively by the Air TYCOM), it does not track this information for the L-Class, as that is a defined surface TYCOM responsibility. Whereas supporting activities can call COMNAVAIRLANT to obtain all the information they need regarding the CV/Ns, they may be forced to contact both TYCOMs in an attempt to get the same information for an L-Class ship. More importantly, a deployed L-Class ship with a significant aviation logistics problem may not always be sure which TYCOM to call for assistance.

The aviation logistics staffs at COMNAVSURFLANT and COMNAVAIRLANT enjoy a relatively good working relationship regarding L-Class ships, but are somewhat hampered in their ongoing support efforts due to the fact that they must effectively coordinate to make even the most basic support decisions. This process is further hampered by the fact that these logistics staffs currently operate from different locations, thereby necessitating nearly continuous telephone communication. The COMNAVAIRLANT staff resides aboard Naval Base Norfolk, while its COMNAVSURFLANT counterpart resides several miles away in the Commander in Chief, U.S. Atlantic Fleet (CINCLANTFLT) Compound. Although a few scant miles may not

seem like much, it sometimes delays the joint TYCOM decision-making process regarding deployed L-Class aviation support.

Competing TYCOM priorities can also affect the overall quality of aviation support available to the deployer. COMNAVAIRLANT's focus is entirely upon optimizing the aviation support of Navy and Marine Corps units; aviation is the only mission. As previously mentioned, this priority on Naval Aviation is best demonstrated by the fact that the CNO entrusts the operation of CV/Ns to the Air TYCOMS (COMNAVAIRLANT and COMNAVAIRPAC). On the other hand, aviation is only one of a number of COMNAVSURFLANT competing concerns. Problems can arise when COMNAVAIRLANT and COMNAVSURFLANT disagree on a decision or policy involving aviation support. To COMNAVSURFLANT, what may be best for aviation may not always be deemed in the best interests of the ship as a whole. Although the aviation logistics staffs at both TYCOMs generally agree on aviation matters, conflicts still sometimes arise due to competing priorities. In a hypothetical example, COMNAVAIRLANT may recommend that a certain junior officer with an aviation background checking aboard *USS Neversail* be placed in the S-6 Division Officer billet, but the L-Class Supply Officer would rather put the new officer in another supply billet where the ship has historically encountered problems. In a situation like this, COMNAVAIRLANT can always recommend something in the best interest of aviation, but COMNAVSURFLANT holds the trump card since it controls supply manning decisions and procedures aboard L-Class ships. Aviation experience is also a critical to effective aviation logistics support. In yet another hypothetical example, COMNAVSURFLANT may allow an S-6 Division Officer to detach the ship during the middle of a scheduled Mediterranean deployment. Although this decision may have been made in the

best interests of the affected officer, the impact on future aviation supply operations may not have been fully realized or even considered before the decision was rendered. In contrast, COMNAVAIRLANT has learned valuable lessons such as this through its continued aviation support experience, and most likely would not have let the S-6 Division Officer deploy to begin with, unless he had agreed to complete the entire deployment.

There is also a significant force restructuring effort underway that will affect Atlantic Fleet aviation. Under this plan, COMNAVAIRLANT will be subsumed by COMNAVAIRPAC (the senior Naval Aviation Fleet Command). Although plans call for COMNAVAIRLANT to retain its name and generally operate as it has in the past, it will now answer to COMNAVAIRPAC. In addition, COMNAVAIRLANT will be reduced from a Vice Admiral (3-star) to a Rear Admiral (2-star) billet. Although this change will remain transparent to the Atlantic CV/N Fleet and supported Navy squadrons, the action may in fact prove detrimental to deployed Marine Corps aircraft operating aboard L-Class ships. As mentioned above, conflict sometimes arises between the Air and Surface TYCOMS regarding differing priorities, but the conflicts rarely make it beyond the 3-star level. The question will soon arise as to how such a situation will unfold when the new COMNAVAIRLANT (soon to be a 2-star command) has a disagreement with COMNAVSURFLANT (still a 3-star command) over L-Class Aviation issues. Will CINCLANTFLT (a four-star command) be required to engage and make the decision or will COMNAVAIRPAC (as the senior fleet aviation and remaining aviation 3-star command) fight a long distance battle from San Diego? Whatever the case, COMNAVAIRLANT will undoubtedly lose some power and influence regarding the L-Class,

and the potential exists for critical aviation logistics decisions to be either delayed or subjugated to other priorities.

Chapter 5: Split-ARG Operations and Aviation Readiness

Since the early 1990s, the Navy and Marine Corps have become increasingly involved in the low end of the conflict spectrum. Entitled "Military Operations Other Than War," such activities such as humanitarian assistance, peacekeeping, and peace enforcement are now a routine undertaking for the deployed MEU. As a method of allowing the deployed MEU to more effectively respond to the aforementioned missions while simultaneously maintaining its forward presence role, the Split-ARG concept came into common use in 1996.[33] For ACE purposes, Split-ARG operations involve establishing independent helicopter operations from both the LHA/LHD and the LPD.

Contrary to popular thought, Split-ARG operations do not necessarily give the MEU Commander two equal ACE capabilities. In fact, Split-ARG aviation operations most often actually reduce ACE capability on the LHA/LHD while providing only limited capability aboard the LPD. Split-ARG operations also pose a significant challenge for the ACE Detachment embarked aboard the LPD, as the LPD was not originally designed to support aircraft for any prolonged period. Although the LPD is equipped with a flight deck, it lacks the other inherent aviation infrastructure necessary to effectively support ACE Detachments. This lack of infrastructure is best demonstrated by the fact that the LPD has no aviation storerooms, spare parts, supply or maintenance personnel, aviation inventory management system, or aviation repair capability. In order to utilize the LPD for Split-ARG operations, the ACE and LHA/LHD

must first outfit the LPD with a spare parts Pack-Up Kit (PUK), embark the required number of supply and maintenance personnel, provide secure containers for the PUK, provide aviation funding, and finally, provide an expeditionary inventory management computer system. All of these aviation assets are taken "out of hide" from the LHA/LHD, as no extra manpower, equipment, or spare parts are currently available within the Navy and Marine Corps to provide the extra level of required support.

Location, distance between ships, and duration of operations are also factors that can affect Split-ARG aircraft readiness. Average Split-ARG duration for the ACE is 58.5 days per deployment, but the longest was 180 days.[34] The LHA/LHD and LPD may operate reasonably close to one another, or they may operate in different areas altogether, as the author witnessed during 1997, when the *USS Kearsarge* (LHD-3) was diverted to the west coast of Africa, while the *USS Ponce* (LPD-15) remained in the Mediterranean. Such extreme distances pose a significant challenge to aviation logistics, as parts stores are divided between the ships, communication is difficult, and the transfer of material between the ships is often untimely. Depending upon the situation, separate lines of communication from CONUS may have to be established for both ships in order to provide the most effective support possible to the ACE.

The act of transferring ACE Detachments and their required materiel to the LPD from the LHA/LHD also statistically decreases the aircraft readiness on both ships. The generic LPD Split-ARG aircraft mix consists of four CH-46E and two UH-1N helicopters for a total of six aircraft.[35] During Split-ARG operations, both the LHA/LHD and the LPD are required to submit daily Aircraft Material Readiness Reports (AMRR) to advise both the warfighters and supporting

commands of current aircraft readiness posture. Instead of the typical 28 aircraft reported aboard the LHA/LHD, there are now only 22. When the LHA/LHD reports on 28 aircraft, each aircraft has an AMRR numerical value of 3.68%, but when the number of aircraft is reduced to 22, the numerical value of each aircraft aboard the LHA/LHD jumps to 4.54%. This change does not pose a problem as long as all aircraft remain MC/FMC, but experience shows that on any given day, 4.34 ACE aircraft aboard the LHA/LHD are not mission capable for various reasons. Given this scenario, what would have been an 85% readiness rate with 28 aircraft reporting aboard the LHA/LHD, now translates to an 82% rate with only 22 aircraft reporting. Over on the LPD, each of the six embarked helicopters represent an astounding AMRR value of 16.6%. Fortunately, the LPD averages less than 1 NMC and 1 FMC aircraft per day during Split-ARG operations, due to the relatively low number of hours flown. Recently, the Split-ARG concept has been utilized more to "show the flag in foreign ports," than to perform real-world missions. Accordingly, flight hours are minimal, as little flying can be accomplished while the ship is pier side. AMRR readiness for Atlantic Fleet Split-ARG LPDs since 1996 is an impressive 88/84, but those Split-ARG deployments involving substantial flight hours have experienced far lower readiness.[36]

Another challenge regarding Split-ARG aviation logistics involves the acquisition of storage space aboard the LPD. ACE detachments simply may not have the room to take all the necessary equipment that they require to ensure optimum aircraft readiness. When the Navy decided to decommission the LKA and LST Class ships during the mid-1990s, ARG size was reduced from five to three ships and the embarking MEU lost approximately 187,577 cubic feet of storage space.[37] Unfortunately, MEU commitments and capabilities did not decrease accordingly, thereby placing a premium on space aboard the three remaining ships. Today,

every cubic foot of space is utilized and the ACE is constantly at odds with the MEU regarding the space necessary to stow Split-ARG aviation supply components and aircraft support equipment aboard the LPD. This fight for space is further exacerbated by the fact that any changing aircraft mix or unforeseen Split-ARG operations do not allow the embarkation planners to effectively identify the proper amount of storage space required. For example, if no Split-ARG aircraft operations are planned for a deployment, the MEU will not set aside any storage space aboard the LPD. If however, last minute Split-ARG operations become necessary, the parts and equipment to support the aircraft must be expeditiously transferred to the LPD and stowed wherever there is room. In such circumstances, it is not uncommon for parts and equipment to be distributed throughout several decks and spaces, making security, inventory, and accountability a nightmare for responsible supply personnel. The author even witnessed one occasion where aviation parts were stored in one of the LPDs refrigerators because there was no other space available. Problems also arise when sensitive aviation components are stored on the weather or flight decks, thereby exposing their containers to corrosive salt spray and increasing the likelihood of damage. In yet another instance witnessed by the author, LPD aviation parts were stowed so deep below deck that they could not be accessed for several days until other MEU cargo could be moved. In this case, the embarked aircraft sat idle until the required part could be retrieved.

Chapter 6: Conclusion and Recommendations

By far, the greatest deficiencies uncovered during the author's research involve the lack of logistics education and experience of Navy and Marine Corps personnel involved in the deployment. A variety of problems exist among these personnel, including a lack of practical

experience, a lack of formal training, and lax training requirements, which in turn sub optimize the performance of key personnel, thereby detracting from deployed aircraft readiness. To solve these deficiencies, we must establish an effective logistics training program for our personnel and ensure they have the opportunity to gain valuable experience prior to deployment. A summary chart of recommended training changes is contained in Appendix P.

As previously mentioned, the ACE Commanding Officer sets the overall tone for squadron operations regarding logistics. Accordingly, we must provide him with the best background on aviation logistics possible, commencing immediately upon his assumption of command. Aggressive action in this regard will give the ACE Commander a true appreciation for the capabilities and restrictions of aviation logistics, thereby providing him with valuable background information to assist in his decision-making. Such information would prove useful to the commander in both a garrison and a deployed environment. To this end, potential squadron Commanding Officers should receive basic aviation logistics information on current aircraft programs, budgets, organization, and responsibilities during their visit to the Commander's Course. Immediately upon reporting to his new command, the Commanding Officer should also receive additional detailed briefings from 2d MAW and the supporting MALS regarding east coast specific aviation logistics policies, procedures, and challenges. The next logical step involves mandating attendance at the 3-day COJASMMM Course, where the Commanding Officer would receive a detailed overview of how aviation supply and aircraft maintenance functions are designed to interact. This course would be especially beneficial to those Commanding Officers that have never served in squadron maintenance billets. Lastly, Commanding Officers should also be required to attend all TYCOM pre-deployment aviation

logistics meetings. The Commanding Officer's presence alone will demonstrate the priority and concern that he places upon aviation logistics and will allow him to interact with other key personnel involved in the deployment. In addition the Commanding Officer can hear firsthand the lessons learned and challenges facing the current deployer.

The billet of ACE Maintenance Officer also requires significant attention if the Marine Corps expects to optimize deployed aircraft readiness. As indicated earlier, research shows that only a few existing MOS 7562 Maintenance Officers have attended the required NAMP Management Course training for this billet, and are therefore not qualified to hold this important job. We can quickly solve this problem by eliminating these part-time Maintenance Officers from the T/O and replacing them with primary MOS 6002 Maintenance Officers that have spent their careers supporting aircraft at both the organizational and intermediate levels. Such a move would ensure optimum aircraft expertise within the ACE and is permissible by the NAMP, which indicates that an MOS 7562 could instead serve as the Assistant Maintenance Officer, thereby fulfilling the requirement to have an aviation-ground officer within the squadron maintenance department. In support of HMM squadrons on the east coast, this T/O change would require HQMC to staff six more MOS 6002 Majors at MCAS New River (three per rotor-wing MAG). Before implementing this solution across the board for all HMM squadrons, it would be prudent to test the change at selected HMM squadrons over an 18-month period. Such a period would naturally incorporate a complete work-up, deployment, and post-deployment cycle. Evaluation as to the effectiveness of the change would be reported via the chain of command to HQMC. If such a program is deemed effective, it could be expanded to all HMM squadrons and even to other aircraft squadrons. A less acceptable alternative to the

aforementioned solution would involve leaving the existing T/O Maintenance Officer billet as an MOS 7562/6002 fill. If the Marine Corps decides to stay with the current plan, it is imperative that HMM Commanding Officers must allocate the necessary manpower and fiscal resources to ensure that their Maintenance Officers attend the required NAMP Management Course training prior to, or within 60 days of assuming their billets and complete the proscribed 6-month period of on-the-job training within the squadron maintenance department. Anything less is simply unsatisfactory and contrary to established Navy and Marine Corps directives. Additional Maintenance Officer training in the form of the JASMMM and COJASMMM Courses should be mandated to ensure that deploying personnel receive the best possible experience and education. If a lack of TAD funding precludes regular attendance at these courses, Commanding Officers should request that NSCS come to MCAS New River and conduct the classes. Contact with NSCS indicates that that the "road show" concept is currently in use and the number of students that can be trained is limited only by the size of the classroom facilities.[38] Theoretically, personnel from all New River squadrons could participate in such a local endeavor, thereby increasing the knowledge of many personnel and saving substantial TAD funding for 2d MAW. It is important to note however, that these arrangements must be made well ahead of time, as NSCS schedules are tight.

Unlike ACE maintenance officers, the MMCOs (both Warrant Officers and Lieutenants) faithfully complete their required MOS maintenance training and their pipeline seems to be working as intended. That said, there remains room for improvement. The author's research on HMM MMCOs at MCAS New River shows that although the practical experience levels among these personnel are considerable (they hold an average 21 months in the MMCO billet), only two

MMCOs have attended the optional JASMMM Course (see Appendix J). Since this course is designed to facilitate the interact between aviation supply and aircraft maintenance communities, it stands to reason that JASMMM should be a mandatory training requirement for these personnel prior to them embarking aboard ship for deployment. This requirement would be most beneficial to the MMCO Lieutenants, as they generally lack the experience of their Warrant Officer counterparts.

Another billet requiring training, experience, and organizational change is that of the MALS Detachment Aviation Supply Officer, a key billet in the aircraft readiness chain. The first logical order of business is to officially change the MEU Troop List to reflect the requirement for a deploying MOS 6602 Lieutenant, vice the MOS 6604 Warrant Officer. Although the typical Warrant Officer generally has more aviation supply savvy, it is imperative that young Lieutenants gain valuable deployment experience, as it is critical to their professional development. A senior aviation supply officer that has deployment experience under his belt tends to have far better perspective on how to effectively plan for and support deployments than one that has no experience in this area. It is also important to understand that deployment opportunities for aviation supply officers beyond the rank of Lieutenant are virtually non-existent, barring the deployment of the entire MALS, an event that has not occurred since Operation Desert Storm in 1991. It is therefore necessary for these Lieutenants to gain as much junior officer deployment experience as possible. Effectively training these Lieutenants will allow them to both gain valuable experience and improve deployed aircraft readiness.

Accordingly, the best solution is to implement a pre-deployment training program within the MALS, whereby the experienced Warrant Officers supervise the training of the young Lieutenants and pass along their valuable aviation supply knowledge and experience. In order to establish such a program, HQMC must first increase the number of Lieutenants within the aviation supply department of the rotary-wing MALS. As previously mentioned, there is no provision in the existing aviation supply department T/O to allow for an officer on deployment, thus forcing the MALS to provide this person "out of hide." This situation is unacceptable from an aircraft readiness standpoint (both within CONUS and deployed), as it dilutes the quality of logistics support available in both locations. Accordingly, it is commonplace for a deploying Lieutenant to simultaneously hold a regular job in the MALS in addition to his pre-deployment duties in support of the ACE. Properly preparing for deployment is a full time job in itself and our deploying Lieutenants must be allowed to devote their time accordingly. The T/O addition of one Lieutenant per rotor-wing MALS would both enable the Aviation Supply Department to maintain required manning in support of CONUS squadrons and also provide improved support for the deploying ACE. Having an extra Lieutenant in the deployment rotation of each MALS would also increase the experience level of the officer by providing greater opportunity for him to gain both garrison and CONUS short deployment experience, prior to his assignment to the Mediterranean. Finally, JASMMM is a must for the MALS Detachment Aviation Supply Officer, as it expands his scope beyond everyday aviation supply operations. Knowledge of aircraft maintenance department organization, functions, and procedures will help the young supply officer to better understand, and thereby support his primary customer.

The importance of having effectively trained L-Class Supply Officers and S-6 Division Officers cannot be overemphasized. To this end, the Supply Officer must ensure that both he and his subordinate S-6 Division Officer attend the required JASMMM training course per the COMNAVAIRLANT Instruction prior to the ship embarking on the scheduled ACE pre-deployment work-up cycle. It is important to remember that this course is currently the only aviation supply training that Navy Supply Officers are required to attend. As the department head aboard ship responsible for all supply operations, the Supply Officer should also be required to attend the 3-day COJASMMM course to sharpen his supervisory skills in the aviation arena and to experience the same training as the ACE Commanding Officer. In addition to the technical merits of the course, a common learning experience for both parties may prove beneficial to ACE-ship relations. As previously mentioned, NSCS is capable of bringing both the JASMMM and COJASMMM courses to the customer, and it would pay significant dividends to periodically schedule these courses in Norfolk to educate as many Atlantic Fleet personnel as possible. The optional NASO requirement should also become a mandatory requirement for both Supply Officer and the S-6 Division Officer, since their experience in supporting aircraft operations is limited to the occasions when the ACE embarks. A significant amount of aviation experience is available at COMNAVAIRLANT and among the CV/N fleet to assist the NASO candidate in his quest, thereby allowing relatively rapid completion of the course. Lastly, COMNAVAIRLANT and COMNAVSURFLANT should also coordinate their efforts to develop an aviation training track for LHA/LHD Supply Officers. A similar COMNAVAIRLANT program exists for CV/N Supply Officers, who routinely serve in several key TYCOM aviation supply support billets for a period of at least one year before assignment to

the aircraft carrier. The experience gained in supporting a deployed ship has proven to be extremely valuable to future deployed supply officers.

The MALS Detachment Aviation Supply Officer can provide optimum support for the ACE if he has complete access to ship's assets (e.g., parts storerooms, equipment, and computer systems). This access is controlled by the L-Class Supply Officer, who is ultimately responsible for deployed aviation supply operations and financially accountable for all AVCAL material. Accordingly, he must have complete trust in the MALS Detachment Aviation Supply Officer before granting him this access. This trust can only be established by formally placing the MALS Detachment Aviation Supply Officer and his/her Marines under the operational control of the ship (see Appendix Q). This action will allow the L-Class Supply Officer to appropriately task and subsequently hold the MALS Detachment Aviation Supply Officer accountable for his performance. Key to this arrangement is the requirement for the L-Class Supply Officer to write the Fitness Report (serve as RS) for the MALS Detachment Aviation Supply Officer, thereby capturing his/her loyalty. To ensure optimum supportability of the ACE and to give the fitness report Marine Corps flavor per the Fitness Report Order, the ACE Commanding Officer should serve as the Reviewing Officer for the report.[39] There are several tangible benefits to this action. First, such an arrangement is consistent with the original "gentlemen's agreement," whereby the MALS Detachment Aviation Supply Officer and his Marines are placed under the operational control of the ship. Second, the Ship's Supply Officer is unquestionably the most qualified person aboard ship to effectively evaluate the performance of a junior supply officer, and third, the arrangement fulfills HQMC intent by preventing the subordination of aviation supply interests to those of aircraft maintenance. Research by the author indicates that both the Marine

Corps Aviation Supply Officer community and the L-Class Supply Officers are in favor of the aforementioned recommendations. In fact, COMNAVSURFLANT introduced an action chit at the annual Marine Corps Aviation Supply Officer Conference held during October 2000, which was overwhelmingly agreed upon by the attendees. HQMC has initially agreed to the proposal and is currently working to formalize the procedure for future Atlantic Fleet LHA/LHD deployments.[40]

The next organizational change required to improve the quality of aviation logistics support available to the deployed ACE involves TYCOM control. As previously mentioned, currently both COMNAVAIRLANT and COMNAVSURFLANT share control over aviation aboard L-Class ships, with COMNAVSURFLANT primarily responsible for pre-deployment preparation, allowancing, procedures, and personnel. On the other side, COMNAVAIRLANT is responsible for moving aviation material aboard ship, expediting hi-priority material requirements, and providing the lion's share of maintenance expertise and engineer support to the deployed ACE. Although moderately effective, this support arrangement has proven to be confusing to the customer and other supporting entities as well as an inefficient use of TYCOM personnel and equipment. Two solutions to this situation come to mind. The first involves the transfer of all LHA and LHD ships to exclusive COMNAVAIRLANT control (see Appendix R), a move that would place the emphasis on aviation and put these ships on par with their CV/N counterparts. In such a situation, COMNAVAIRLANT would be responsible for all aspects of manning and operations aboard these ships. Although this seems like a good idea from the aviation perspective, it is important to remember that the L-Class Class ships are multi-purpose platforms, where surface assault capability must be maintained. Accordingly, both

COMNAVSURFLANT and COMMARFORLANT may have concerns that COMNAVAIRLANT would place too much emphasis on aviation and not enough on other ship missions. An additional expected argument from COMNAVSURFLANT involves prestige. The L-Class ships are the largest and arguably the most capable ships that COMNAVSURFLANT controls and it is to be expected that they would not readily be willing to relinquish control of them, as to do so would give control of the biggest ships in the Atlantic Fleet to COMNAVAIRLANT, leaving COMNAVSURFLANT with command of only the destroyer, cruiser, frigate, and support ship fleets. Accordingly, precious funding along with and those personnel seeking to and/or best qualified to command a large vessel would be drawn to COMNAVAIRLANT, thereby potentially diminishing both the financial resources and the quality of commanders within the surface fleet. A second and less controversial solution to the existing problem would be to allow COMNAVSURFLANT to retain overall control of the L-Class, but to transfer all aviation supply, aircraft maintenance, and other aircraft operational functions and personnel to COMNAVAIRLANT. Such a move would increase the quality of aviation support by capitalizing upon the knowledge and expertise of COMNAVAIRLANT personnel, whose primary focus is upon aviation readiness. This action would also improve customer service to both the L-Class and supporting activities, make more efficient use of TYCOM personnel, and potentially offer a reduction of supporting infrastructure billets due to the elimination of duplicative functions.

Although Split-ARG offers the MEU commander flexibility in the conduct of deployed operations, Split-ARG operations also pose several unique challenges for aviation logistics, some of which are can be conquered via education and philosophy, and others through procedural

change. The first step to solving the current problem is for COMNAVAIRLANT, COMNAVSURFLANT, and COMMARFORLANT to educate the ACE, MEU, its chain of command, and all supporting activities that by their very nature, Split-ARG operations are inherently detrimental to aviation readiness on both the LHA/LHD and the LPD. This situation is due partially to the statistical method in which daily readiness percentages are computed and partially due to the fact that precious manpower, support equipment, and parts must be divided between two different locations, thereby diluting the quantity and/or quality of support available to both of them. The end state for such education would be for the student to be able to differentiate between normal Split-ARG readiness and that readiness which should be of legitimate concern to them.

Another possible solution to improving Split-ARG readiness would be to increase the AVCAL aboard the L-Class to compensate for the additional difficulty caused by the LPD aviation operations. Currently, the AVCAL for L-Class ships is based upon the number and type of aircraft supported aboard that ship and that ship's capability to repair parts in the AIMD. Although the total number of aircraft supported between the two ships would remain the same, it is rarely possible to equally split and transfer parts and repair capability between the LHA/LHD and the LPD, thus forcing the aircraft aboard the LPD operate without their intended (planned) level of logistics support. Increasing AVCAL allowances aboard the LHA/LHD is no easy task, as funding for spare aviation parts within the Navy and Marine Corps is extremely limited and storage space aboard the LHA/LHD is severely constrained. To demonstrate the need for more parts, the Navy and Marine Corps must formalize the requirement to conduct ongoing Split-ARG operations in the Mediterranean. It is simply financially unrealistic to expect an unlimited

AVCAL in support of Split-ARG operations, so the Navy and Marine Corps should standardize an LPD aircraft mix and typical duration and request AVCAL support from NAVICP-P accordingly. Outfitting all Atlantic Fleet LHA/LHD with Split-ARG enhanced AVCAL would also be cost prohibitive, so a procedure involving Split-ARG deployable support packages is recommended. For example, two Split-ARG support packages could be made to support the traditional LPD aircraft mix of four CH-46E and two UH-1N aircraft with no AIMD support for a duration of 60 days (the average Split-ARG duration). A good baseline for NAVICP-P to utilize for the new packages resides at COMNAVSURFLANT, which retains notional Split-ARG “out of hide" support package listings for the aforementioned aircraft in both 30 and 90-day variants. Once the new permanent packages could be assembled, one of them would be given to the current deployer and the other placed aboard the next deployer. When the LHA/LHD returned from deployment, it would simply transfer the Split-ARG package to the next ship in line to deploy. If funding permitted, it would be prudent to expand the enhanced Split-ARG AVCAL to allow the MEU Commander more mission flexibility on the LPD by including allowances for all model ACE rotor-wing aircraft embarked aboard the LHA/LHD. AH-1W aircraft. Although this recommendation may provide a way to improve parts availability aboard the LPD, it is important to remember that it does nothing to improve the current situation involving support equipment and personnel, both of which will continue to be provided "out of hide" from the LHA/LHD.

Further compounding the Split-ARG aircraft readiness problem is the fact that *Austin* Class LPDs generally lack the required space to embark aviation infrastructure (e.g., parts, support equipment, and personnel) to optimize aircraft readiness. Even if these assets and

personnel were readily available from the LHA/LHD, there would be a scramble to find suitable space aboard the LPD to accommodate them. ACE personnel must be adequately berthed and be afforded suitable workspaces. Similarly, expensive aircraft parts must be readily accessible and protected from corrosive salt spray and humidity. Unfortunately, the ACE will be forced to continue to scramble for space aboard the LPD for the next couple of years until the scheduled arrival of the new *San Antonio* (LPD-17) Class in 2002.[41] In this regard, the ACE must effectively coordinate with the MEU, COMNAVAIRLANT, and COMNAVSURFLANT to identify potential Split-ARG requirements as early as possible in order to arrange for timely and efficient material embarkation aboard the LPD and to accomplish all required specialized training for embarked aviation supply personnel. The good news is that the forthcoming *San Antonio* Class LPD is designed to replace four classes of amphibious ships (LPD-4, LSD, LST, and LKA) and will have significantly more storage space than the current *Austin* Class LPD.[42] Not only does this new ship provide more overall storage space for the embarked GCE and MSSE, it contains a number of storage improvements for the ACE, including a dedicated aviation supply storeroom, accessible storage for bulk components, and workspaces for embarked supply and maintenance personnel.[43]

Although the deployed ACE continues to meet and exceed established CNO aircraft readiness goals in the Mediterranean, there is still room for the Navy and Marine Corps to improve the quality of aviation logistics available to the deployer. Effectively training and educating our Commanding Officers and aviation logisticians, developing improved organizational procedures, and streamlining logistics support will both ensure optimum aircraft readiness and allow the ACE to remain a valuable weapon in the MEU Commander's arsenal.

Notes

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[12] Chief Petty Officer Brian Zimpelman, USN, Aviation Data Analyst (AZC/AW), Aviation Maintenance Instructor, Navy Supply Corps School (Code 34), Athens, GA. E-mail interview by author, 08 January 2001.

[13] Major Donald Chipman, USMC, Marine Liaison Officer and Instructor, Aircraft Maintenance Officer School, Naval Aviation Schools Command (NASC) Code 054, Chief of Naval Education and Training (CNET), Pensacola, FL. E-mail interview by author, 08 February 2001.

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[17] Navy Supply Corps School, "JASMMM Student Rosters," 02 December 1996-29 September 2000. A summary of this information is contained in Appendix H.

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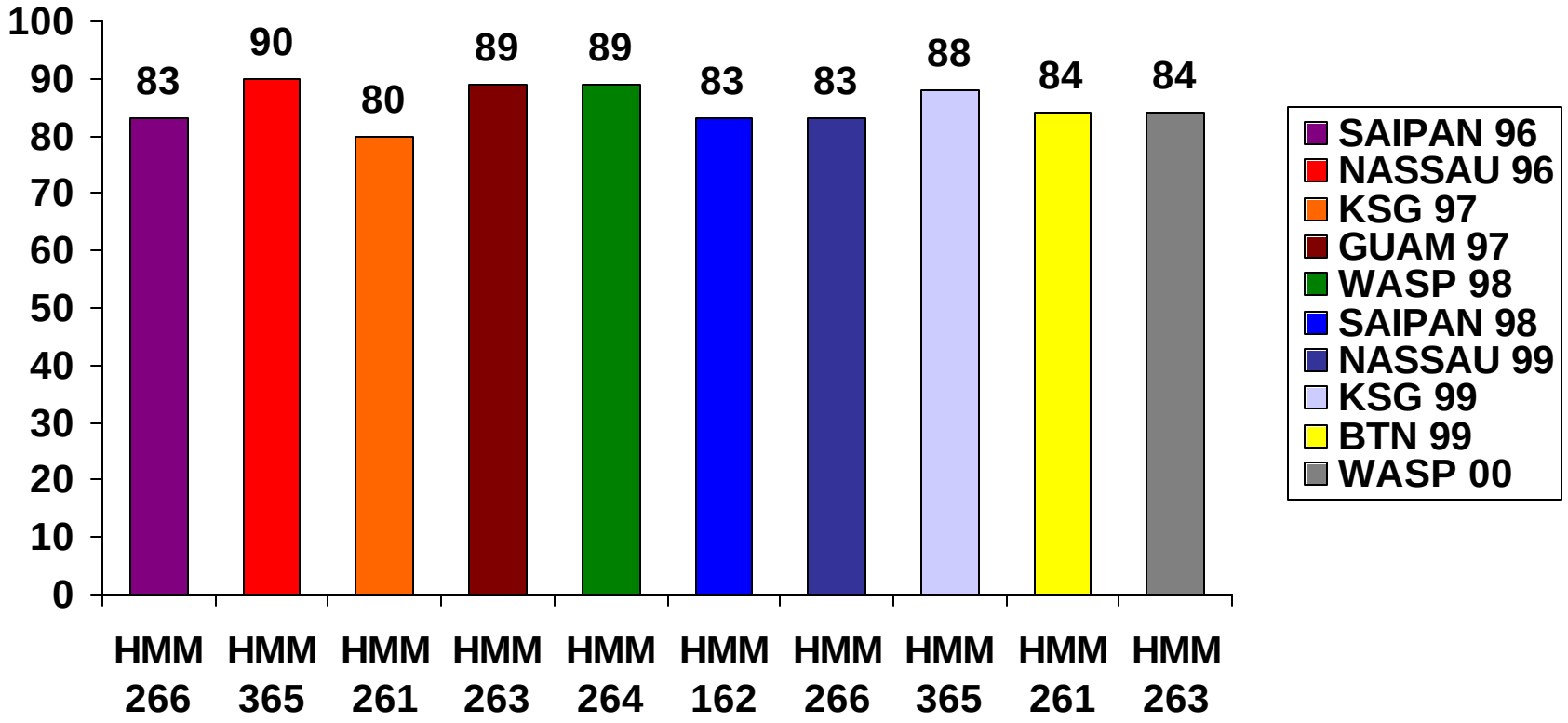
[43] Major Christopher B. Snyder, USMC, LPD-17 Marine Corps Liaison Officer, Naval Sea Systems Command (NAVSEA). E-mail interview with author, 29 January 2001.

APPENDIX A

CRUISE ACFT MC

CRUISE AVERAGE 85.4 MC

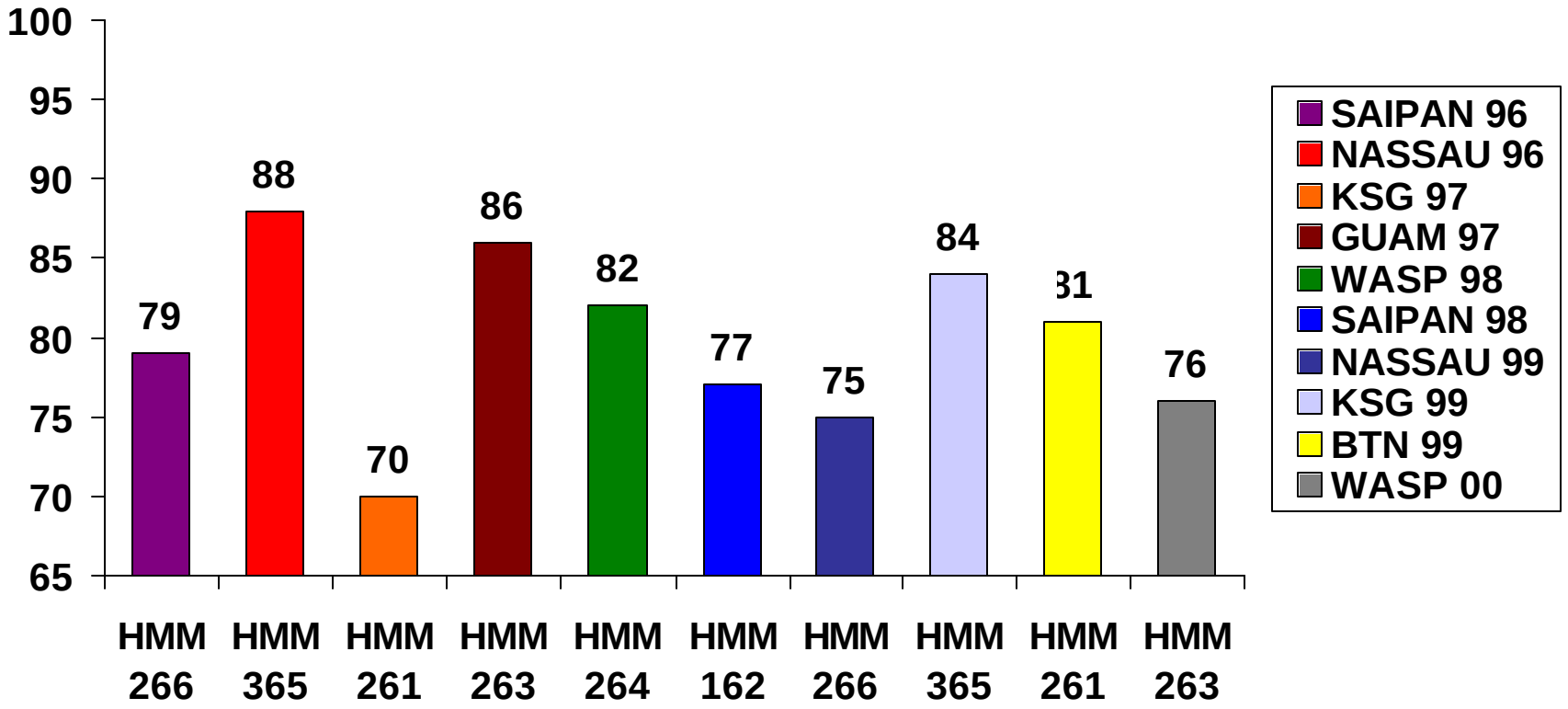


SOURCE: COMNAVAIRLANT AMRR DATA

APPENDIX A

CRUISE ACFT FMC

CRUISE AVERAGE 80.2 FMC



SOURCE: COMNAVAIRLANT AMRR DATA

APPENDIX B

L-CLASS AVIATION SUPPLY AND AIRCRAFT MAINTENANCE LOGISTICS SURVEY

DECEMBER 2000 - FEBRUARY 2001

NAME	RANK	SERVICE	UNIT(S)	MOS	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
ADKINS, JOSEPH H.	MAJ	USMC	COMNAVAIRLANT N411D	SUPPLY												N/A								####	OPS		REPLA	MAINT	
BACHMAN, RUSSELL H.	CWO2	USN	USS WASP AIMD	MAINT				N/A		N/A	N/A	N/A		N/A	N/A									####	OPS		REPLA	MAINT	
CLOUSER, DANIEL	LT	USN	USS WASP S-6	SUPPLY				N/A																####	OPS		REPLA	MAINT	
DAFFRON, JEANNE K.	1STLT	USMC	MALS-26/HMM-264	SUPPLY													N/A							N/A	LOG		N/A	MAINT	
EDWARDS, MARK S.	CWO2	USMC	HMM-162	MAINT																				MISSIO	OPS		REPLA	MAINT	
ELLISON, RAYMOND R.	CONT	CIV	COMNAVAIRLANT NC411D1	SUPPLY																				####	OPS		REPLA	MAINT	
FABIEN, DOMINIQUE	GYSGT	USMC	COMNAVSURFLANT N412D13	SUPPLY			N/A	N/A		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
FINELLI, RONALD R.	MAJ	USMC	COMNAVAIRLANT N422C3	MAINT											N/A			N/A			N/A			N/A	OPS	N/A	N/A	N/A	
FLYNN, CHRISTOPHER B.	CAPT	USMC	MALS-29/HMM-365	SUPPLY																				N/A	LOG		REPLA	UPPLY	
FRUTSCHE, MICHAEL S.	CAPT	USMC	COMNAVAIRLANT N411D1/MALS-26	SUPPLY			N/A						N/A						N/A					MISSIO	OPS		REPLA	MAINT	
GONZALEZ, MICHAEL D.	CAPT	USMC	MALS-26/HMM-261/AIRLANT N411D1	SUPPLY												N/A	N/A						N/A	ISSIO	N/A		N/A	N/A	
HANAGAN, LORI A.	CWO2	USMC	MALS-29/HMM-263	SUPPLY																				MISSIO	OPS		REPLA	MAINT	
HATHAWAY, SETH A.	MAJ	USMC	COMNAVSURFLANT N412D	SUPPLY							N/A	N/A				N/A	N/A	N/A		N/A		N/A		MISSIO	OPS		REPLA	MAINT	
HERRINGTON, MICHAEL L.	SSGT	USMC	COMNAVAIRLANT N411D6	SUPPLY			N/A															N/A		MISSIO	OPS		REPLA	N/A	
KISH, ROBERT G.	GYSGT	USMC	COMNAVAIRLANT N411D5/MALS-29	SUPPLY																				MISSIO	OPS	N/A	EPLA	MAINT	
LOCKARD, ROBERT L.	CWO2	USMC	HMM-365/MALS-29	MAINT														N/A				N/A	N/A	####	LOG		REPAI	UPPLY	
MANDEL, MICHAEL P.	CAPT	USMC	MALS-26/HMM-264/HMX-1	SUPPLY																		N/A	N/A	ISSIO	OPS		REPLA	MAINT	
MAUNEY, JOSEPH A.	LTCOL	USMC	COMNAVAIRLANT N421C/MARFORLANT G-3	MAINT	N/A									N/A		N/A	N/A	N/A		N/A				MISSIO	OPS	N/A	EPLA	MAINT	
MILLER, COLLEEN R.	CAPT	USMC	MALS-26/HMM-261	SUPPLY																			N/A	ISSIO	OPS		REPLA	MAINT	
PERKINS, PENNY L.	SSGT	USMC	MALS-29/HMM-365	SUPPLY																				N/A	LOG		REPLA	UPPLY	
OVERALL RESULT:																								MISSIO	OPS		REPLA	MAINT	

LEGEND:

WHITE	N/A	- NO RESPONSE
GREEN		- NO PROBLEM
YELLOW		- MINOR PROBLEM
RED		- SIGNIFICANT PROBLEM

REMARKS:

THIS SURVEY INITIALLY SENT TO 23 AVIATION SUPPLY AND AIRCRAFT MAINTENANCE PERSONNEL CURRENTLY OR PREVIOUSLY INVOLVED IN ATLANTIC FLEET L-CLASS DEPLOYMENTS. 15 SUPPLY AND 5 MAINTENANCE PERSONNEL RES THE RESULTS WERE COLOR-CODED TO SHOW POTENTIAL PROBLEM AREAS FOR THE AUTHOR TO STUDY.

THE INDIVIDUAL RESPONSES ARE NUMBERED 1-25 ACROSS THE TOP OF THE CHART. THE RESPECTIVE QUESTIONS ARE CONTAINED IN PAGES 45-47 OF THIS APPENDIX (B).

¡PONDED.

07 December 2000

Ladies and Gentlemen:

I am currently working on a Master's Paper regarding deployed Landing Force Sixth Fleet (LF6F) readiness from 1997-2000. As personnel who were/are currently intimately involved in the aviation supply/logistics support of these deployments, I would greatly appreciate your comments/feedback. Since little to no traditional reference material on this subject exists, I plan to rely on you "duty experts" as the references for my paper. Please provide all information/statistics/opinions that you feel relevant. If you have controversial or other data that is sensitive, please let me know and we'll work something out off the record.

In today's budget battles, parts shortages are a given. What I am looking for specifically are those things (not specific parts problems) that have historically caused deployed readiness problems. As you all know, supply support is just one element of integrated logistics support—other factors such as maintenance planning, manpower, support equipment, training, and facilities all play vital roles, and a deficiency in any one of them will result in increased supply requirements. My thesis asks if we can improve existing readiness through organizational, philosophical, procedural, or educational changes.

Please take a good look at the below list. This list is only a starting point intended to jog your thinking—- your comments, recommendations, and suggestions on other topics is most encouraged.

I would greatly appreciate your response via E-mail not later than 22 December 2000. I'm not looking for a novel, but will be more than happy to read whatever you can provide!

/S/
J. H. KNAPP
Major, U.S. Marine Corps

PRE-DEPLOYMENT

1. Is COMNAVAIRLANT/COMNAVSURFLANT pre-deployment training (Split Amphibious Ready Group (ARG) and N411D Operations) effective?

2. Are COMMARFORLANT/COMNAVAIRLANT/COMNAVSURFLANT pre-deployment conferences effective?

3. Are COMNAVSURFLANT Pre-deployment Milestone Meetings effective?

4. Does the Aviation Combat Element (ACE) receive any formal supply/maint turnover at New River from the recently returned ACE?

5. Does the ACE thoroughly review the ship's consumable Aviation Consolidated Allowance List (AVCAL) and provide realistic feedback?

WORK-UPS/DEPLOYMENT

6. Are ACE aircraft really "Full Mission Capable" (FMC) when they embark?

7. How well does the ACE manage its high-time components?

8. How well does the ACE manage its phase maintenance schedule?

9. Does the ACE function as a team or as separate aircraft type/model/series (T/M/S) communities?

10. Does the ACE and ship effectively utilize standard supply/maintenance references such as the Mission Essential Subsystem Matrices (MESM), Configuration Directive (CONFIGDIR), Aircraft Material Readiness Report (AMRR) Instruction, and Naval Supply Systems Command (NAVSUP) Publication 485?

11. Do supply and maintenance use Illustrated Parts Breakdown (IPB) publications effectively?

12. Does the Afloat Intermediate Maintenance Department (AIMD) have the tools and equipment it requires?

13. How successful is the AIMD in repairing components?

14. Does S-6 utilize the COMNAVAIRLANT Deployed Procedures Handbook?

15. How effective is communication among Aviation Sores Officer (S-6), AIMD, and ACE?

16. Is the daily AMRR truly a joint product?

17. Do the MALS Detachment Aviation Supply Officer (AVNSUPO) & ACE Maintenance Material Control Officer (MMCO) review all high-priority requisitions prior to passing the requirements offship?

EDUCATION/EXPERIENCE

18. What supply/maintenance education and experience does the Maintenance Officer (MO), MMCO, S-6, AVNSUPO, and ACE Commanding Officer (CO) Have? Have they attended formal Military Occupational Specialty (MOS) School, Joint Aviation

Supply/Maintenance Material Management (JASMMM), or COJASMMM courses? What about On-The-Job training (OJT)?

PHILOSOPHY

19. Do Split Amphibious Ready Group (ARG) operations affect readiness?

20. What is the ACE readiness philosophy? 100% aircraft up? Meet mission?

21. Do operations drive logistics or do logistics drive operations?

22. Does the ACE have difficulty in conforming to the tighter supply/maint standards encountered aboard ship?

23. What is the ACE maintenance philosophy--"repair" or "replace?"

24. What is the MALS Det-ACE Fitness Report (FITREP) reporting relationship?

25. Does the AIMD have the opportunity to repair and/or manufacture consumable material?

APPENDIX C

HMM COMMANDING OFFICER EDUCATION AND EXPERIENCE SURVEY

FEBRUARY, 2001

	PRIMARY MOS	SECONDARY MOS	PRIOR MO / AMO	NAMP INDOC LONG COURSE	NAMP MGMT SHORT COURSE	COMPLETED JASMMM	COMPLETED COJASMMM	# PRIOR MED DEPLOYMENTS	TIG	TIS	REMARKS
MAG-26											
HMM-261	7562	NO	YES / YES	NO	NO	NO	NO	1	3Y6M	21Y	3 WESTPAC, 2 UDP
HMM-264	7562	9958	NO / NO	NO	YES	NO	NO	3	UKN	UKN	N/A
HMM-266	7562	NO	NO / NO	NO	NO	NO	NO	5	5Y	22Y	N/A
MAG-29											
HMM-162	7562	7577	NO / YES	NO	NO	NO	NO	0	3Y6M	21Y	NO AMO TRNG / FMR OPSO
HMM-263	7562	NO	NO / NO	NO	NO	NO	NO	5	3Y	21Y	N/A
HMM-365	7562	7597	NO / NO	NO	NO	NO	NO	0	3Y6M	21Y	3 WESTPAC

SOURCE: DATA OBTAINED FROM AUTHOR'S E-MAIL SURVEY CONDUCTED AT MAG-26 AND MAG-29, MCAS NEW RIVER.

REMARKS:

ONLY 17% OF CURRENT HMM COMMANDING OFFICERS SERVED PREVIOUSLY IN THE MAINTENANCE OFFICER BILLET. THIS OFFICER DID NOT RECEIVE THE PRESCRIBED TRAINING PER THE OPNAV 4790.2G (NAMP) OR THE MARINE CORPS MOS MANUAL (MCO P1200.7V). IRONICALLY, ANOTHER CURRENT HMM COMMANDING OFFICER RECEIVED THE REQUIRED MAINTENANCE OFFICER TRAINING, BUT NEVER SERVED IN THAT CAPACITY.

NONE OF THE CURRENT HMM COMMANDING OFFICERS HAVE ATTENDED EITHER JASMMM OR COJASMMM.

AVERAGE MEDITERRANEAN EXPERIENCE PER HMM COMMANDING OFFICER IS 2.3, BUT 33% HAVE NEVER DEPLOYED THERE.

AVERAGE TIME IN SERVICE FOR AN HMM COMMANDING OFFICER IS 21 YEARS, WHILE TIME IN GRADE AVERAGES 3.7 YEARS.

APPENDIX D

EXISTING AVIATION LOGISTICS TRAINING REQUIREMENTS FOR NAVY AND MARINE CORPS PERSONNEL

BILLET	RANK	MOS/DESIG	COJASMMM	JASMMM	NAMP INDOC	NAMP MGMT	AVN BQC	SUPPLY BQC	ALOC	NASO
			A-8B-0037	A-8B-0020	Q-4D-2010	Q-4D-2011	A-8B-0031	A-8B-0012	N/A	N/A
			3 DAYS	10 DAYS	66 DAYS	30 DAYS	75 DAYS	120 DAYS	15 DAYS	24 MOS
ACE CO	LTCOL	7562	OPTIONAL	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ACE MO	MAJ	7562 & 6002	OPTIONAL	OPTIONAL	N/A	REQD	N/A	N/A	OPTIONAL	N/A
ACE MMCO	CW02	6004	N/A	OPTIONAL	REQD	N/A	N/A	N/A	N/A	N/A
MALS DET AVNSUPO	WO	6604	N/A	OPTIONAL	N/A	N/A	REQD	N/A	N/A	N/A
L-CLASS SUPPO	CDR	3100	OPTIONAL	REQD	N/A	N/A	N/A	REQD	N/A	OPTIONAL
L-CLASS S-6 DIVO	LT	3100	N/A	REQD	N/A	N/A	N/A	REQD	N/A	OPTIONAL

SOURCE: TRAINING AND EDUCATION REQUIREMENTS EXTRACTED FROM THE OPNAV 4790.2G, CNALINST 4440.2,NSCS ATHENS WEBSITE, NASO ORDER, AND CNET WEBSITE.

REMARKS:

THE ACE COMMANDING OFFICER CURRENTLY HAS NO MANDATORY REQMT FOR AVIATION LOGISTICS TRAINING; COJASMMM IS OPTIONAL.

THE ACE MAINTENANCE OFFICER (MOS 7562) IS REQD TO ATTEND THE NAMP MGMT COURSE AT NASC PENSACOLA; JASMMM AND COJASMMM ARE OPTIONAL, BUT ENCOURAGED.

WARRANT OFFICER MMCO'S ARE REQUIRED TO ATTEND THE NAMP MGMT COURSE; JASMMM OPTIONAL. REGULAR MMCO'S MUST ATTEND THE NAMP INDOC COURSE; JASMMM IS OPTIONAL

MALS DET AVNSUPOS ATTEND AVNBQC AT NSCS ATHENS TO GAIN 6602 OR 6604 MOS; JASMMM IS OPTIONAL.

SHIPBOARD SUPPLY OFFICERS ATTEND BQC AT NSCS ATHENS. JASMMM REQD FOR AVN SHIP BILLETS. NASO IS OPTIONAL. SHIP SUPPLY OFFICER CAN ATTEND COJASMMM AS A DEPT HEAD.

APPENDIX E

COMMANDING OFFICER JOINT AVIATION SUPPLY-MAINTENANCE MATERIAL MANAGEMENT (COJASMMM COURSE) 13JAN97 - 06APR00

OFFICER STUDENTS (48) 100%

NAVY (39) 81%

LANT L-CLASS (1) 2%	LANT CV/N (3) 8%	LANT SQUADRON (8) 21%	OTHER (27) 69%
SUPPLY	SUPPLY	UNK	UNK
(1) 100%	(3) 100%	(8) 21%	(27) 69%

MARINE CORPS (9) 19%

1ST MAW (1) 12%	2D MAW (0) 0%	3D MAW (2) 22%		4TH MAW (1) 11%	OTHER (5) 55%	
OPS	N/A	MAINT	SUPPLY	XO	CO	SUPPLY
(1) 100%	(0) 0%	(1) 50%	(1) 50%	(1) 100%	(1) 20%	(4) 80%

SOURCE: DATA EXTRACTED FROM NAVY SUPPLY CORPS SCHOOL COJASMMM ROSTERS 13JAN97-06APR00

REMARKS:

L-CLASS SUPPOS REPRESENT ONLY 2% OF NAVY STUDENTS AND CV/N SUPPOS REPRESENT 8%. THE MAJORITY OF NAVY ATTENDEES (69%) WERE FROM NON-FLEET UNITS.

NO HMM COMMANDERS OR ANY OTHER 2DMAW PERSONNEL HAVE ATTENDED THIS COURSE SINCE IT BEGAN IN 1996. ONLY SLIGHT PARTICIPATION FROM OTHER USMC WINGS. MOST USMC STUDENTS (55%) WERE FROM STAFF BILLETS.

NO MAINTENANCE PERSONNEL FROM THE L-CLASS OR CV/N COMMUNITY ATTENDED THIS COURSE.

APPENDIX F

HMM MAINTENANCE OFFICER EDUCATION AND EXPERIENCE SURVEY

FEBRUARY, 2001

	RANK	PRIMARY MOS	SECONDARY MOS	NAMP INDOC LONG COURSE	NAMP MGMT SHORT COURSE	# MONTHS IN BILLET	COMPLETED JASMMM	COMPLETED COJASMMM	# PRIOR MED DEPLOYMENTS	TIG	TIS	REMARKS
MAG-26												
HMM-261	MAJ	7562	6002	NO	YES	26	NO	NO	0	3Y	13Y	5 WESTPAC
HMM-264	MAJ	7562	7577	NO	NO	1.5	NO	NO	1	4Y3M	14Y8M	DESERT SHIELD/STORM
HMM-266	MAJ	7566	3002	NO	YES	5	NO	NO	1	4Y4M	14Y7M	N/A
MAG-29												
HMM-162	MAJ	7562	2502	NO	NO	19	NO	NO	3	2Y	14Y	N/A
HMM-263	MAJ	7562	7577/ 0302	NO	NO	17	NO	NO	2	1Y4M	12Y	N/A
HMM-365	MAJ	7562	NO	NO	YES	3	NO	NO	2	11M	11Y	N/A

SOURCE: DATA OBTAINED FROM AUTHOR'S E-MAIL SURVEY CONDUCTED AT MAG-26 AND MAG-29, MCAS NEW RIVER.

REMARKS:

ONLY 50% OF THE HMM MAINTENANCE OFFICERS HAVE COMPLETED THE PRESCRIBED SHORT COURSE PER THE NAMP AND MCO P1200.7V.

AVERAGE MAINTENANCE OFFICER TIME IN BILLET IS 11.9 MONTHS. PER THE NAMP, ALL MAINTENANCE OFFICERS SHOULD COMPLETE THE REQUIRED TRAINING PRIOR TO, OR WITHIN 60 DAYS OF ASSUMING THEIR BILLET.

NONE OF THE HMM MAINTENANCE OFFICERS HAVE COMPLETED THE OPTIONAL JASMMM OR COJASMMM COURSES.

HMM MAINTENANCE OFFICERS CURRENTLY AVERAGE 1.5 MEDITERRANEAN DEPLOYMENTS PER INDIVIDUAL.

AVERAGE TIG FOR HMM MAINTENANCE OFFICERS IS 31 MONTHS AND TIS IS 13.2 YEARS.

TIB FOR HMM MAINTENANCE OFFICERS RANGES FROM 45 DAYS TO 26 MONTHS.

APPENDIX G

NAVY AND MARINE CORPS ATTENDANCE AT NAMP MGMT COURSE

1996-2000

TOTAL (677)	
USMC (277)	USN (400)

1ST MAW (21)	2D MAW (104)	3D MAW (79)	4TH MAW (46)	USMC OTHER (27)

2D MAW (104)

MAG 14 (46)	MAG 26 (13)	MAG 29 (31)	MAG 31 (14)

MAG 26 (13)

HMT-204 (1)			HMM-261 (2)			HMM-264 (2)			HMM-266 (1)			HMLA-167 (1)			HMH-461 (2)			MALS-26 (4)		
ENL	WO	OFF	ENL	WO	OFF	ENL	WO	OFF	ENL	WO	OFF	ENL	WO	OFF	ENL	WO	OFF	ENL	WO	OFF
1	0	0	1	0	1	0	2	0	0	0	1	0	1	0	0	1	1	0	4	0
MOS 7562			MOS 7562			MOS 7562			MOS 7562			MOS 9967/7563/7565			MOS 7566					
CAPT		MAJ	CAPT		MAJ	CAPT		MAJ	CAPT		MAJ	CAPT		MAJ	CAPT		MAJ			
0		0	0		1	0		0	1		0	0		0	0		1			

MAG 29 (31)

HMT-302 (11)			HMM-162 (2)			HMM-263 (2)			HMM-365 (3)			HMLA-269 (3)			HMH-464 (2)			MALS-29 (8)		
ENL	WO	OFF	ENL	WO	OFF	ENL	WO	OFF	ENL	WO	OFF	ENL	WO	OFF	ENL	WO	OFF	ENL	WO	OFF
1	0	10	0	1	1	1	0	1	0	0	3	0	1	2	0	0	2	4	3	1
MOS 9969/7566			MOS 7562			MOS 7562			MOS 7562			MOS 9967/7563/7565			MOS 7566					
CAPT		MAJ	CAPT		MAJ	CAPT		MAJ	CAPT		MAJ	CAPT		MAJ	CAPT		MAJ			
6		4	1		0	0		1	1		2	0		2	0		2			

SOURCE: ***NASC STUDENT ROSTERS 1996-2000***

REMARKS: MOS LISTING PER MCO P1200.7V PAT I (MOS MANUAL): 7562 (CH46E PILOT); 7563 (UH1N PILOT); 7565 (AH1W PILOT); 7566 (CH53E PILOT); 9967 (ANY HELO PILOT); AND 9969 (ANY PILOT OF NFO).

THE COURSE ROSTERS FOR THREE CLASSES (97030, 97110 AND 97150) DID NOT CONTAIN STUDENT MOS AND UNIT INFORMATION. ACCORDINGLY, THESE PERSONNEL COULD NOT BE EFFECTIVELY TRACED BACK TO THEIR PARENT COMMAND SO THE INFORMATION WAS EXCLUDED FROM THE TABLE ABOVE. CLASS 97030 CONTAINED 7 MARINES (1 ENL/2 CWO/4OFF). CLASS 97110 CONTAINED 11 MARINES (4 ENL/7 OFF). CLASS 97150 WAS A WARRANT OFFICER-ONLY CLASS THAT CONTAINED 22 MARINES.

ALL MAJORS (O-4) ASSIGNED TO ROTOR-WING SQUANDRON MAINTENANCE OFFICER BILLETS ARE REQUIRED TO OBTAIN THE ADDITIONAL MOS OF 6002 (AIRCRAFT MAINTENANCE OFFICER) PER HQMC T/O. PER MCO P1200.7V PART I, THE 6002 MOS CAN ONLY BE OBTAINED BY ATTENDING THE RESIDENT MAINTENANCE OFFICER SHORT COURSE AT NASC PENSACOLA, FL, COMPLETING 6 MONTHS OF ON THE JOB TRAINING, AND BEING RECOMMENDED BY THEIR COMMAND. PER OPNAV 4790 VOL. 1, ALL MAJORS ARE REQUIRED TO ATTEND THIS TRAINING WITHIN 60 DAYS OF ASSUMING A SQUADRON MAINTENANCE BILLET.

APPENDIX H

JOINT AVIATION SUPPLY-MAINTENANCE MATERIAL MANAGEMENT (JASMMM) COURSE

02DEC96 - 29SEP00

OFFICER STUDENTS (406) 100%

NAVY (289) 71%	MARINE CORPS (117) 29%

LANT L-CLASS (14) 5%		LANT CV/N (20) 7%		OTHER (255) 88%
MAINT	SUPPLY	MAINT	SUPPLY	
(1) 7%	(13) 93%	(5) 25%	(15) 75%	

1ST MAW	2D MAW	3D MAW	4TH MAW	AWS	OTHER
(19) 16%	(31) 27%	(31) 27%	(19) 16%	(11) 9%	(6) 5%

2D MAW (31) 100%

MAG-14 (9) 29%		MAG-26 (7) 23%		MAG-29 (9) 29%		MAG-31 (6) 19%	
MAINT	SUPPLY	MAINT	SUPPLY	MAINT	SUPPLY	MAINT	SUPPLY
(8) 89%	(1) 11%	(5) 71%	(2) 29%	(8) 89%	(1) 11%	(6) 100%	(0) 0%

SOURCE: DATA EXTRACTED FROM NAVY SUPPLY CORPS SCHOOL JASMMM ROSTERS 02DEC96 - 29SEP00

REMARKS:

NO 2D MAW HMM MAINTENANCE OFFICERS (MAJOR, MOS 7562) ATTENDED JASMMM DURING THIS TIME PERIOD.

ONLY TWO 2D MAW HMM MMCO'S ATTENDED DURING THIS PERIOD.

ONLY TWO MALS-26/MALS-29 DET AVIATION SUPPLY OFFICERS ATTENDED JASMMM DURING THIS PERIOD.

IN BOTH L-CLASS AND CV/N COMMUNITIES, SUPPLY DEPARTMENT PARTICIPATION IN JASMMM IS SIGNIFICANTLY GREATER THAN THAT OF MAINTENANCE (93% AND 75%, RESPECTIVELY).

MAW PARTICIPATION IS LED BY 2D MAW AND 3D MAW. 2DMAW BREAKDOWN SHOWS THAT THE OVERWHELMING MAJORITY OF JASMMM ATTENDEES ARE FROM MAINTENANCE.

APPENDIX I

ADVANCED LOGISTICS OFFICER COURSE INFORMATION

1996-2000

COURSE NUMBER	*STUDENTS*	*MOS 6002 (AVN MAINT)*	*MOS 6602/6604 (AVN SUPPLY)*
ALOC 96	58	1	3
ALOC 1-97	70	4	1
ALOC 2-97	67	0	0
ALOC 1-98	40	3	1
ALOC 2-98	73	5	3
ALOC 1-99	72	4	5
ALOC 2-99	63	2	2
ALOC 1-00	63	2	4
ALOC 2-00	57	5	4
TOTAL STUDENTS	**563**		
TL AVN STUDENTS	**50 (8.9%)**	**26**	**24**
AVG STUD/COURSE	**62.5**	**2.9**	**2.7**

COMMAND	*MOS 6002*	*MOS 6602/6604*
1ST MAW	4	3
2D MAW	2	4
3D MAW	6	3
4TH MAW	4	2
OTHER	10	12

SOURCE: ***MARINE CORPS UNIVERSITY, ADVANCED LOGISTICS OFFICER COURSE STUDENT ROSTERS 1996-2000***

REMARKS:

NO 2D MAW MAJOR OR LTCOL MOS 7562 HAS ATTENDED THIS COURSE SINCE IT'S INCEPTION.

AVIATION STUDENTS (MOS 6602/6604/6002) COMPRISE 8.9% OF TOTAL STUDENT THROUGHPUT.

APPENDIX J

HMM MAINTENANCE MATERIAL CONTROL OFFICER EDUCATION AND EXPERIENCE SURVEY

FEBRUARY, 2001

	RANK	PRIMARY MOS	SECONDARY MOS	NAMP INDOC LONG COURSE	NAMP MGMT SHORT COURSE	# MONTHS IN BILLET	COMPLETED JASMMM	# PRIOR MED DEPLOYMENTS	TIG	TIS
MAG-26										
HMM-261	1STLT	6002	NO	YES	NO	7	YES	0	1Y9M	3Y9M
HMM-261 (2)	CWO2	6004	NO	NO	YES	18	NO	0	6M	13Y
HMM-264	CWO2	6004	NO	NO	YES	4	NO	3	2Y	16Y11M
HMM-264 (2)	CAPT	6002	NO	YES	NO	18	NO	1	2Y7M	6Y9M
HMM-266	CAPT	6004	NO	YES	NO	3	NO	5	2Y6M	21Y
MAG-29										
HMM-162	CWO3	6004	NO	NO	YES	60	NO	6	10M	20Y
HMM-263	WO	6004	NO	NO	YES	1	YES	2	6M	11Y
HMM-365	CWO2	6004	6032	NO	YES	15	NO	3	2Y	18Y

SOURCE: DATA OBTAINED FROM AUTHOR'S E-MAIL SURVEY CONDUCTED AT MAG-26 AND MAG-29, MCAS NEW RIVER.

REMARKS:

ALL WARRANT OFFICERS AND REGULAR OFFICERS CURRENTLY SERVING IN HMM MMCO BILLETS HAVE COMPLETED THE REQUIRED MOS TRAINING AT NASC PENSACOLA.

ONLY TWO OF EIGHT (25%) OF THE MMCO'S HAVE ATTENDED THE OPTIONAL JASMMM COURSE AT NSCS ATHENS.

AVERAGE MMCO TIME IN BILLET IS 15.75 MONTHS AND AVERAGE NUMBER OF MED CRUISES IS 2.5.

AVERAGE WARRANT OFFICER TIME IN SERVICE IS 15.8 YEARS

APPENDIX K

MALS DETACHMENT AVIATION SUPPLY OFFICER EDUCATION AND EXPERIENCE SURVEY FEBRUARY, 2001

	COMPLETED AVN BQC	COMPLETED JASMMM	# AVN TOURS	# PRIOR MED DEPLOYMENTS	TIG	TIS	REMARKS
1STLT							
	YES	NO	1	0	9M	9Y8M	PRIOR ENL MOS 0151 (ADMIN)
	YES	NO	1	0	3M	9Y6M	PRIOR ENL MOS 7210 (AAD)
	YES	NO	1	1	9M	2Y9M	N/A
	YES	NO	1	0	4M	2Y4M	N/A
	YES	NO	1	0	9M	12Y	PRIOR ENL MOS 0151 (ADMIN)
2NDLT							
	YES	NO	1	0	1Y6M	8Y10M	PRIOR ENL MOS 3051 (GROUND SUPPLY)
	YES	NO	1	0	1Y3M	1Y3M	N/A
WO / CWO							
	YES	NO	3	0	3Y	15Y	N/A
	YES	YES	3	1	3Y	18Y	N/A
	YES	NO	4	1	1Y6M	16Y	N/A

SOURCE: ***DATA OBTAINED FROM AUTHOR'S E-MAIL SURVEY CONDUCTED AT MALS-26 AND MALS-29, MCAS NEW RIVER.***

REMARKS:

100% OF POTENTIAL MALS DETACHMENT AVIATION SUPPLY OFFICERS (LIEUTENANTS AND WARRANT OFFICERS) HAVE COMPLETED THE REQUISITE AVN BQC TRAINING TO OBTAIN THE 6602 OR 6604 MOS.

ONLY 10% OF POTENTIAL MALS DETACHMENT AVIATION SUPPLY OFFICERS HAVE COMPLETED THE OPTIONALJASMMM TRAINING.

ALL LIEUTENANTS ARE ON THEIR FIRST AVIATION TOURS, WHILE THE WARRANT OFFICERS AVERAGE 3.3 AVIATION TOURS OF EXPERIENCE.

LIEUTENANTS AVERAGE 7 YEARS AND 3 MONTHS TIME IN SERVICE, WHILE WARRANT OFFICERS AVERAGE 16.33 YEARS.

ONLY 14% OF THE LIEUTENANTS HAVE PREVIOUS DEPLOYED EXPERIENCE IN THE MEDITERRANEAN, AS OPPOSED TO 66% OF THE WARRANTS.

OF THE LIEUTENANTS WITH PRIOR ENLISTED EXPERIENCE IN THE MARINE CORPS, NONE OF IT WAS IN AVIATION SUPPLY FIELD.

APPENDIX L

L-CLASS SUPPLY OFFICER EDUCATION AND EXPERIENCE SURVEY

FEBRUARY, 2001

	COMPLETED JASMMM	COMPLETED COJASMMM	NASO QUALIFIED	# AVN TOURS	PRIOR S-6 DIVO	LDO OR REG	REMARKS
CV / CVN							
ENT	NO	NO	YES	3	NO	REG	PRIOR CNAL N411 AND N413
IKE	YES	NO	YES	3	NO	REG	N/A
JFK	YES	NO	YES	3	YES	REG	ACADEMIC DIR/XO OF NSCS
HST	YES	NO	NO	1	NO	REG	PRIOR CNAL N411 AND N412
TR	YES	NO	YES	4	NO	REG	CNAL N411 AND CV/N ASUPPO
GW	N/A	N/A	N/A	N/A	N/A	N/A	N/A
LHA / LHD							
SPN	YES	NO	YES	1	NO	REG	N/A
NAS	YES	NO	YES	3	NO	REG	N/A
BTN	NO	NO	NO	1	NO	REG	N/A
KSG	N/A	N/A	N/A	N/A	N/A	N/A	N/A
WSP	N/A	N/A	N/A	N/A	N/A	N/A	N/A
IWO	YES	NO	NO	1	NO	REG	N/A

SOURCE: DATA OBTAINED FROM AUTHOR'S E-MAIL SURVEY OF ATLANTIC FLEET L-CLASS SHIPS AND AIRCRAFT CARRIERS, NORFOLK, VA.

REMARKS:

80% OF CV/N SUPPLY OFFICERS COMPLETED THE REQUIRED JASMMM COURSE PER CNALINST 4440.2, AS OPPOSED TO 75% OF THE L-CLASS SUPPLY OFFICERS. NONE OF THE CVIN OR L-CLASS SUPPLY OFFICERS COMPLETED THE OPTIONAL COJASMMM COURSE.

80% OF THE CV/N SUPPLY OFFICERS ARE NASO QUALIFIED AS OPPOSED TO ONLY 50% OF L-CLASS SUPPLY OFFICERS.

CV/N SUPPLY OFFICERS AVERAGE 2.8 AVIATION TOURS OF EXPERIENCE, WHILE L-CLASS SUPPLY OFFICERS AVERAGE ONLY 1.5.

60% OF THE CV/N SUPPLY OFFICERS HELD AVIATION SUPPORT BILLETS AT COMNAVAIRLANT PRIOR TO ASSIGNMENT ABOARD THE AIRCRAFT CARRIER. NO CURRENT L-CLASS SUPPLY OFFICERS HAVE THIS COMNAVAIRLANT EXPERIENCE.

THE SUPPLY OFFICERS ABOARD *USS GEORGE WASHINGTON* (CV/N-73), *USS KEARSARGE* (LHD-3), AND *USS WASP* (LHD-1) DID NOT RESPOND TO THE AUTHOR'S SURVEY.

APPENDIX M

L-CLASS AVIATION STORES (S-6) DIVISION OFFICER EDUCATION AND EXPERIENCE SURVEY FEBRUARY, 2001

	COMPLETED JASMMM	NASO QUALIFIED	# AVN TOURS	PRIOR S-6 DIVO	LDO OR REG	REMARKS
CV / CVN						
ENT	YES	YES	2	NO	REG	N/A
IKE	YES	NO	1	NO	REG	N/A
IKE (2)	NO	NO	1	NO	REG	N/A
IKE (3)	YES	YES	3	NO	CWO	2 PRIOR TOURS AVDLR OFFICER
JFK	YES	NO	1	NO	REG	NO AVN EXPERIENCE/3RD TOUR LT
HST	YES	NO	1	NO	REG	SUB EXPERIENCE
TR	NO	YES	3	NO	LDO	AVDLR OFFICER LAST CRUISE
GW	N/A	N/A	N/A	N/A	N/A	N/A
LHA / LHD						
SPN	N/A	N/A	N/A	N/A	N/A	N/A
NAS	YES	YES	2	YES	REG/TAR	11YRS ENL, 15YRS SUB, 3YRS RES
BTN	NO	NO	4 ENL	NO	REG	PRIOR AKC
KSG	N/A	N/A	N/A	N/A	N/A	N/A
WSP	YES	NO	1	NO	REG	N/A
IWO	YES	YES	3	YES	REG	ASD NAS BPT, AAVNSUPO MALSEK

SOURCE: DATA OBTAINED FROM AUTHOR'S E-MAIL SURVEY OF ATLANTIC FLEET L-CLASS SHIPS AND AIRCRAFT CARRIERS, NORFOLK, VA.

REMARKS:

ONLY 71% OF CV/N S-6 DIVISION OFFICERS COMPLETED THE REQUIRED JASMMM COURSE PER CNALINST 4440.2, AS OPPOSED TO 75% OF THE L-CLASS S-6 DIVISION OFFICERS.

ONLY 43% OF THE CV/N S-6 DIVISION OFFICERS ARE NASO QUALIFIED AS OPPOSED TO 50% OF L-CLASS SUPPLY OFFICERS.

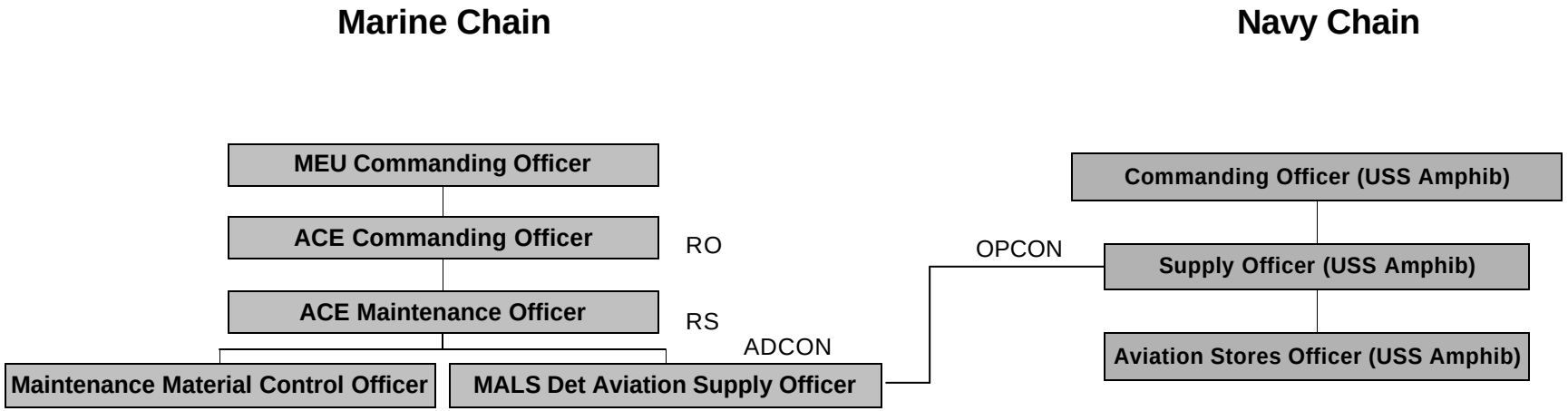
CV/N S-6 DIVISION OFFICERS AVERAGE ONLY 1.7 AVIATION TOURS OF EXPERIENCE, WHILE L-CLASS SUPPLY OFFICERS CURRENTLY AVERAGE 2.5.

50% OF THE CURRENT L-CLASS S-6 DIVISION OFFICERS SERVED PREVIOUS TOURS IN THE S-6, AS OPPOSED TO NONE OF THE CURRENT CV/N S-6 DIVISION OFFICERS.

THE S-6 DIVISION OFFICERS ABOARD *USS GEORGE WASHINGTON* (CV/N-73), *USS KEARSARGE* (LHD-3), AND *USS SAIPAN* (LHA-2) DID NOT RESPOND TO THE AUTHOR'S SURVEY.

APPENDIX N

ACE DET AVNSUPO EXISTING CHAIN OF COMMAND



ALTHOUGH THE MALS DET AVNSUPO SHOULD BE OPCON TO THE SHIP PER THE STANDING "GENTLEMENS AGREEMENT" AND ADCON TO THE ACE, THE ACE OFTEN RETAINS THE DET AVNSUPO IN AN ATTEMPT TO LEVERAGE SUPPLY SUPPORT. THIS ACTION CAUSES FRICTION BTWN THE ACE AND SHIP, DIVIDES LOYALTIES, SUBOPTIMIZES RESOURCES, AND ULTIMATELY DETRACTS FROM ACE ACFT READINESS.

APPENDIX O

EXISTING TYPE COMMANDER L-CLASS OVERSIGHT

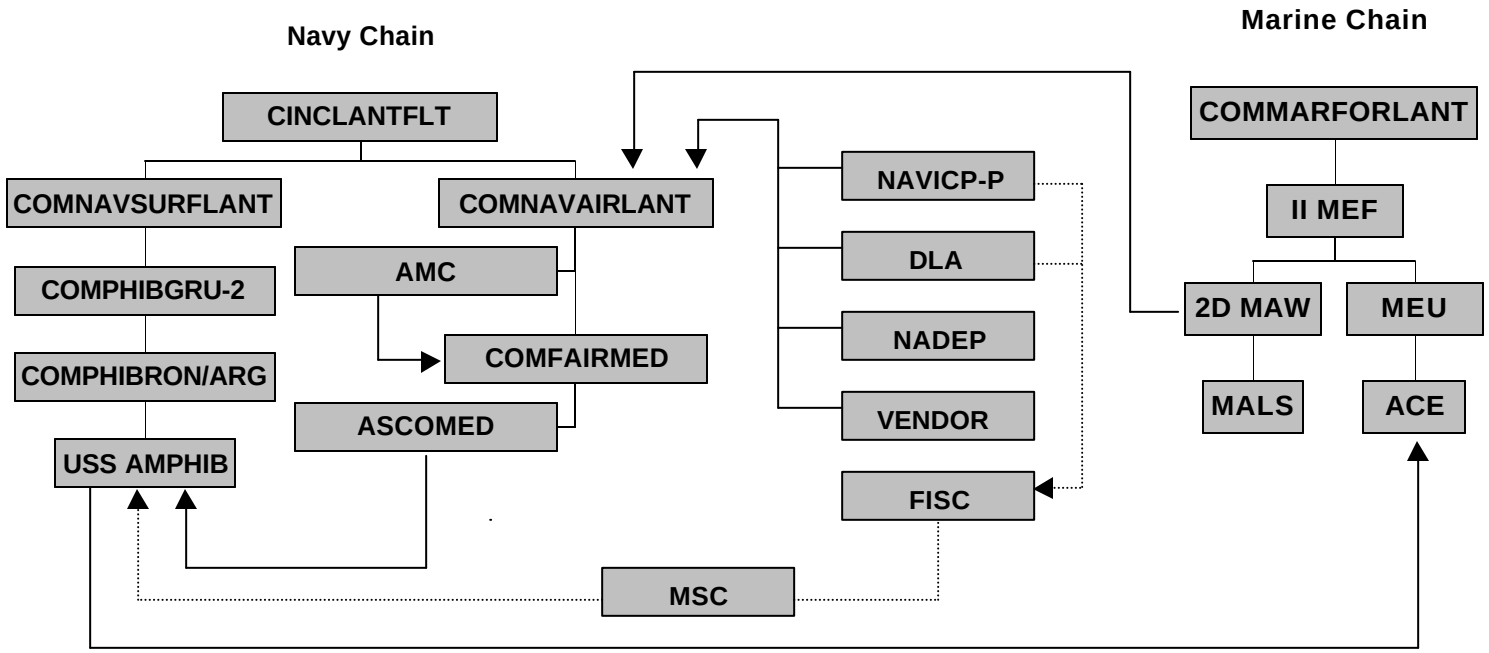


DIAGRAM SHOWS THE EXISTING MULTIPLE TYCOM AND SUPPORTING ACTIVITY SUPPORT FOR L-CLASS SHIPS. THE CURRENT METHOD CREATES CONFUSION, DELAYS DECISION-MAKING, AND IS NOT CUSTOMER FRIENDLY. DOTTED LINES SHOW STOCK AVN SPARES MATERIAL ROUTING.

APPENDIX P

RECOMMENDED AVIATION LOGISTICS TRAINING REQUIREMENTS FOR NAVY AND MARINE CORPS PERSONNEL

BILLET	RANK	MOS/DESIG	COJASMMM	JASMMM	NAMP INDOC	NAMP MGMT	AVN BQC	SUPPLY BQC	ALOC	NASO
			A-8B-0037	A-8B-0020	Q-4D-2010	Q-4D-2011	A-8B-0031	A-8B-0012	N/A	N/A
			3 DAYS	10 DAYS	66 DAYS	30 DAYS	75 DAYS	120 DAYS	15 DAYS	24 MOS
ACE CO	LTCOL	7562	REQD	OPTIONAL	N/A	N/A	N/A	N/A	N/A	N/A
ACE MO	MAJ	7562 & 6002	OPTIONAL	REQD	N/A	REQD	N/A	N/A	OPTIONAL	N/A
ACE MMCO	CW02	6004	N/A	REQD	REQD	N/A	N/A	N/A	N/A	N/A
MALS DET AVNSUPO	WO	6604	N/A	REQD	N/A	N/A	REQD	N/A	N/A	N/A
L-CLASS SUPPO	CDR	3100	REQD	REQD	N/A	N/A	N/A	REQD	N/A	REQD
L-CLASS S-6 DIVO	LT	3100	N/A	REQD	N/A	N/A	N/A	REQD	N/A	REQD

SOURCE: TRAINING AND EDUCATION REQUIREMENTS EXTRACTED FROM THE OPNAV 4790.2G, CNALINST 4440.2,NSCS ATHENS WEBSITE, NASO ORDER, AND CNET WEBSITE.

REMARKS:

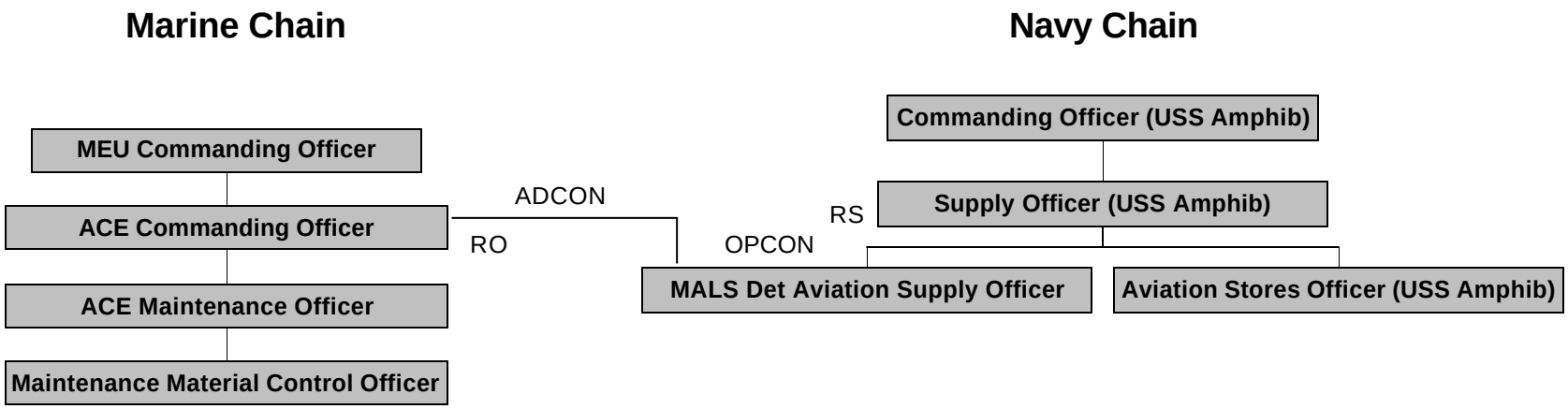
ITEMS IN RED PRINT SHOW AUTHOR'S RECOMMENDATIONS FOR COMMANDING OFFICER, MAINTENANCE OFFICER, AND SUPPLY OFFICER TRAINING AND EDUCATION IMPROVEMENTS. THE INTENT IS TO GIVE COMMANDING OFFICER'S A SOLID AVIATION LOGISTICS ORIENTATION, ENSURE THAT MOS 7562 MAINTENANCE OFFICERS RECEIVE AS MUCH TRAINING AS POSSIBLE, AND ALLOW MMCO'S TO ATTEND FOLLOW-ON TRAINING.

THE INTENT FOR NAVY L-CLASS PERSONNEL IS TO IMMERSE THEM IN AVAITION SUPPLY TRAINING, AS THEY ARE ONLY REQUIRED TO ATTEND JASMMM IF SERVING IN AN AVIAITION BILLET. THE NASO PROGRAM AND COJASMMM SHOULD BE MANDATORY EVENTS AS WELL TO HELP COMPENSATE FOR A LACK OF EXPERIENCE/BUSINESS WHEN THE ACE IS NOT ABOARD.

THE MALS DET AVIATION SUPPLY OFFICER NEEDS JASMMM EXPERIENCE PRIOR TO DEPLOYMENT, AS IT WILL HELP HIM IN DEALING WITH THE ACE MAINTENANCE DEPARTMENT AND THE L-CLASS AIMD.

APPENDIX Q

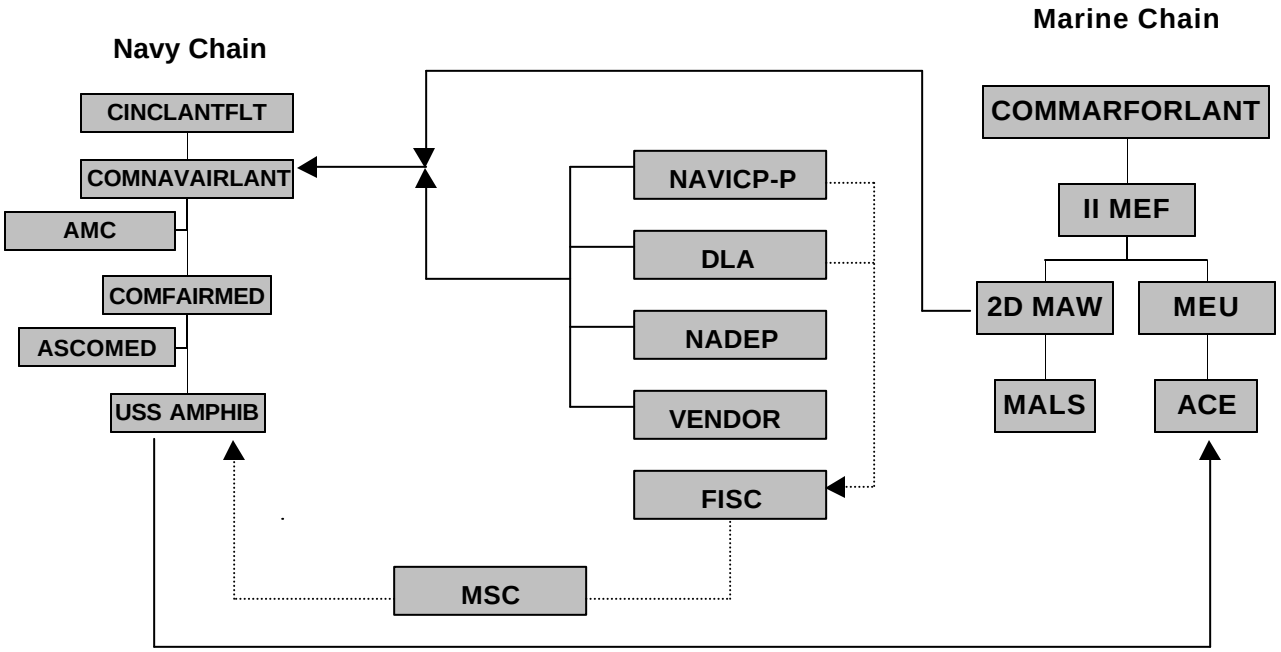
ACE DET AVNSUPO RECOMMENDED CHAIN OF COMMAND



MALS DET AVNSUPO IS OPCON TO THE SHIP AND ADCON TO THE ACE. FITNESS REPORT WRITTEN BY SHIP AND REVIEWED BY ACE. TENSION BTWN ACE AND SHIP RESOLVED, ACCESS TO RESOURCES OPEN, NO SUPPLY VS. MAINT CONFLICT OF INTEREST. HQMC WORKING TO STANDARDIZE SOP.

APPENDIX R

RECOMMENDED TYPE COMMANDER L-CLASS OVERSIGHT



EXCLUSIVE COMNAVAIRLANT CONTROL OF L-CLASS SHIPS WILL ENSURE PRIORITY IS PLACED UPON AVIATION, SIMPLIFY THE SUPPORT CHAIN, AND LOWER LOGISTICS RESPONSE TIMES. COMNAVSURFLANT STAFF SHOULD BE INCORPORATED INTO COMNAVAIRLANT INFRASTRUCTURE. DOTTED LINES SHOW AVN STOCK SPARES MATERIAL ROUTING.

Glossary

ACE	Aviation Combat Element
ADCON	Administrative Control
AIMD	Afloat Intermediate Maintenance Department
ALOC	Advanced Logistics Officer Course
AMO	Assistant Maintenance Officer
AMRR	Aircraft Material Readiness Report
ARG	Amphibious Ready Group
AVCAL	Aviation Consolidated Allowance Listing
AVNBQC	Aviation Supply Basic Qualification Course
BQC	Basic Qualification Course
CD-ROM	Compact Disc-Read Only Memory
CINCLANTFLT	Commander in Chief, U.S. Atlantic Fleet
CNET	Chief of Naval Education and Training
CNO	Chief of Naval Operations
COJASMMM	CO Joint Aviation Supply-Maintenance Material Management
COMMARFORLANT	Commander Marine Forces, U.S. Atlantic Fleet
COMNAVAIRLANT	Commander Naval Air Force, U.S. Atlantic Fleet
COMNAVAIRPAC	Commander Naval Air Force, U.S. Pacific Fleet
COMNAVSURFLANT	Commander Naval Surface Force, U.S. Atlantic Fleet
CONUS	Continental United States
CV/N	Aircraft Carrier/Nuclear Powered
FITREP	Fitness Report
FMC	Full Mission Capable
GCE	Ground Combat Element
HMH	Helicopter Squadron, Marine Heavy Lift (CH-53E)
HML/A	Helicopter Squadron, Marine Light/Attack (UH-1N & AH-1W)
HMM	Helicopter Squadron, Marine Medium Lift (CH-46E)
HQMC	Headquarters, Marine Corps
IMA	Intermediate Maintenance Activity
IP	Instructional Publication
JASMMM	Joint Aviation Supply-Maint Material Management
L-Class	Landing Ships (Common term for LPH/LHA/LHD Class Ships)
LHA	Landing Ship, General-purpose Assault (*USS Tarawa* Class)
LHD	Landing Ship, Multi-purpose Assault (*USS Wasp* Class)
LKA	Landing Ship, Cargo (*USS Charleston* Class)
LPD	Landing Ship, Transport Dock (*USS Austin* Class)
LPH	Landing Ship, Helicopter Platform (*USS Iwo Jima* Class)
LSD	Landing Ship, Dock (*USS Anchorage* Class)
LST	Landing Ship, Tank (*USS Newport* Class)
MAG	Marine Aircraft Group
MAGTF	Marine Air-Ground Task Force
MALS	Marine Aviation Logistics Squadron

MAW	Marine Aircraft Wing
MC	Mission Capable
MCAS	Marine Corps Air Station
MCCDC	Marine Corps Combat Development Command
MCDEC	Marine Corps Development and Education Command
MCDP	Marine Corps Doctrinal Publication
MCO	Marine Corps Order
MCRP	Marine Corps Reference Publication
MEF	Marine Expeditionary Force
MEU	Marine Expeditionary Unit
MMCO	Maintenance Material Control Officer
MOS	Military Occupational Specialty
NAMP	Naval Aviation Maintenance Program
NASC	Naval Aviation Schools Command
NASO	Naval Aviation Supply Officer
NAVICP-P	Naval Inventory Control Point (Philadelphia, PA)
NMC	Non Mission Capable
NMCM	Non Mission Capable--Maintenance
NMCS	Non Mission Capable--Supply
NSCS	Navy Supply Corps School (Athens, GA)
OPCON	Operational Control
OPNAV	Office of the Chief of Naval Operations
PUK	Pack-up Kit
PES	Performance Evaluation System
PMC	Partial Mission Capable
PME	Professional Military Education
PMCM	Partial Mission Capable--Maintenance
PMCS	Partial Mission Capable--Supply
RO	Reviewing Officer
RS	Reporting Senior
S-6	Ship Aviation Stores Division
SAR	Search and Rescue
SC	Supply Corps
SCIR	Subsystems Capability Impact Reporting
Split-ARG	Split Amphibious Ready Group
TAD	Temporary Additional Duty
TBS	The Basic School
T/O	Table of Organization
TYCOM	Type Commander
USMC	United States Marine Corps
USN	United States Navy
VMA	“V” (Fixed-Wing) Marine Attack Squadron (AV-8B)

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